CHAPTER 24: DESCRIPTION OF PCBs

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FR3950α only

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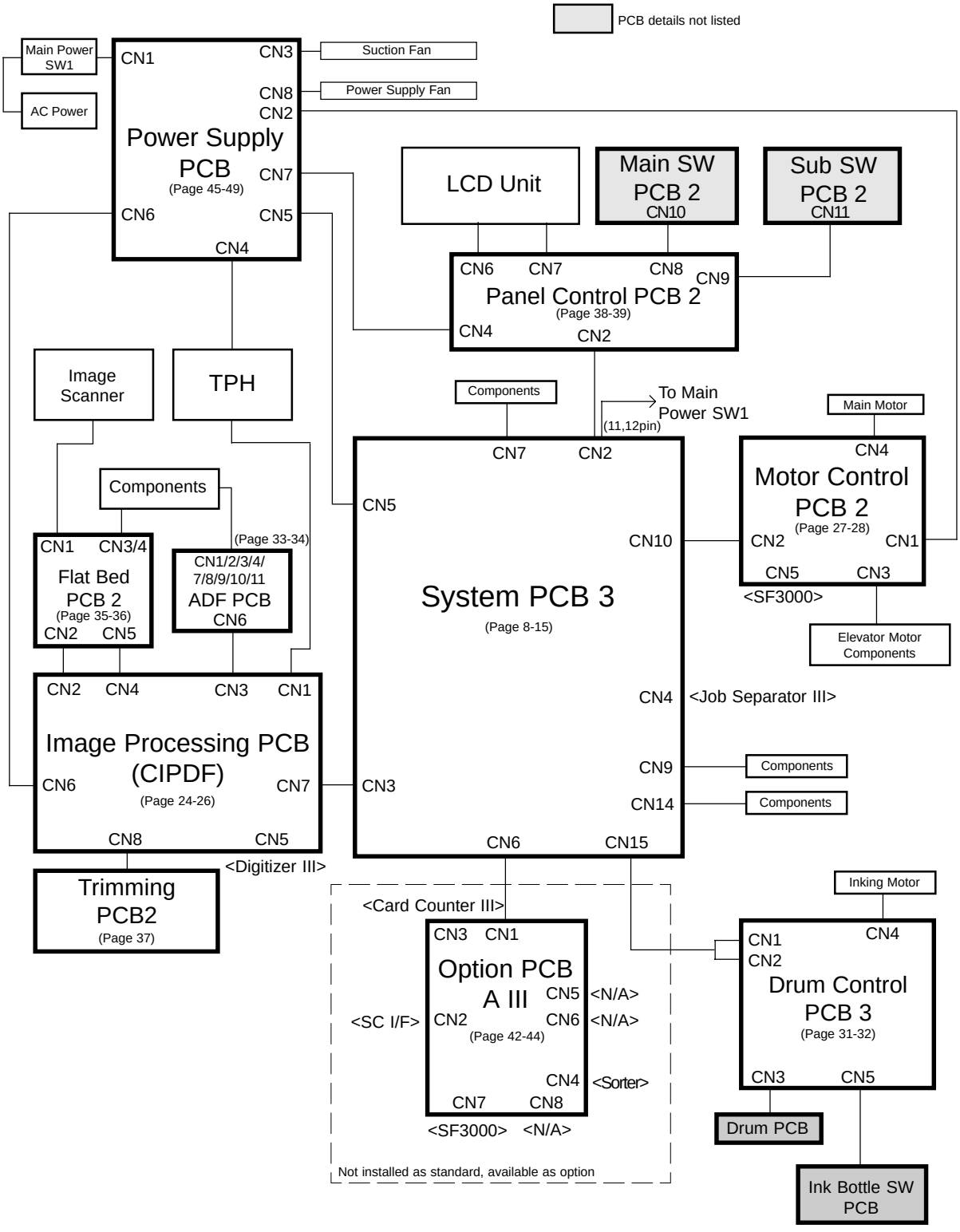
1. BLOCK CHART(1/3)

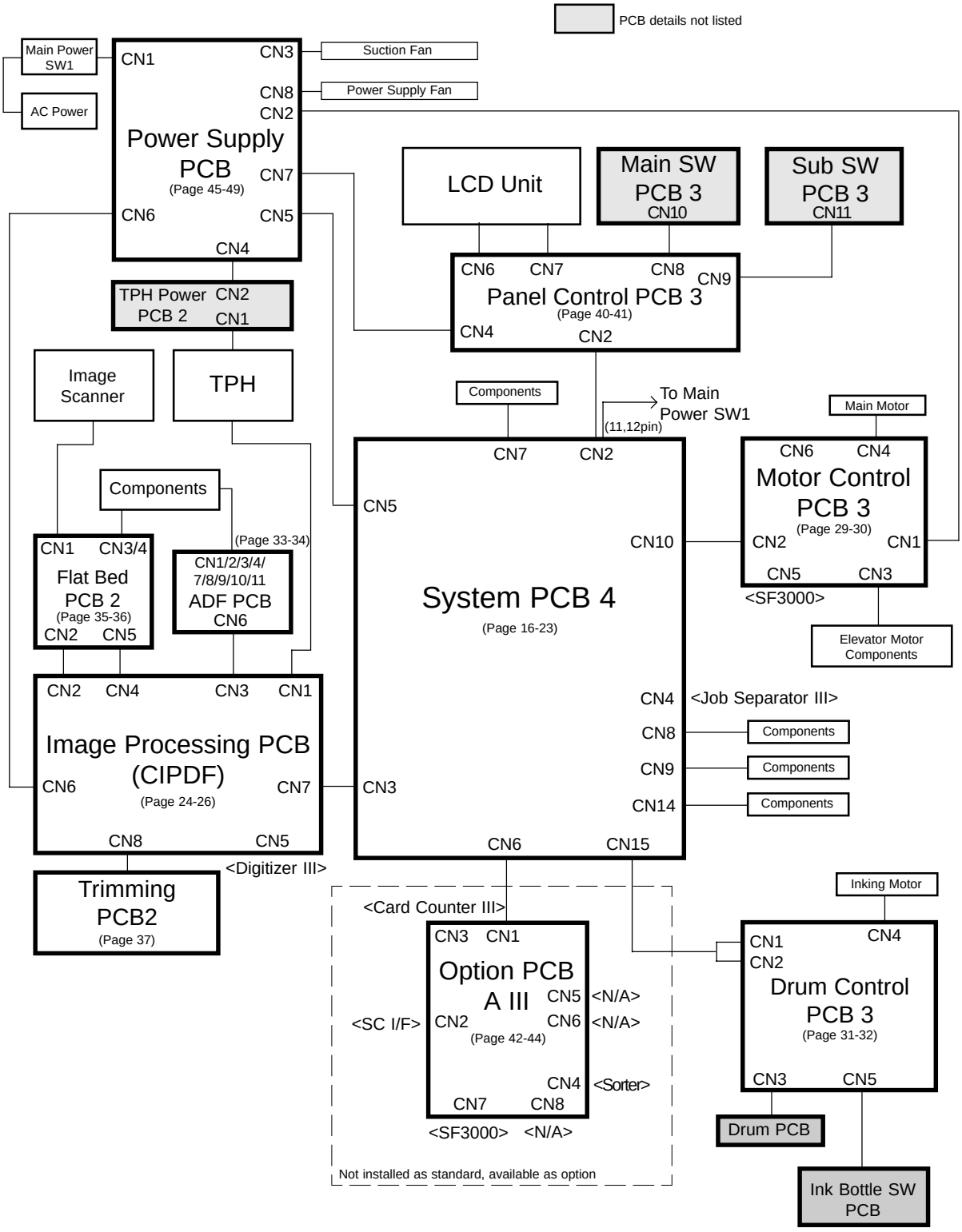
1. BLOCK CHART

1-1. FR2950



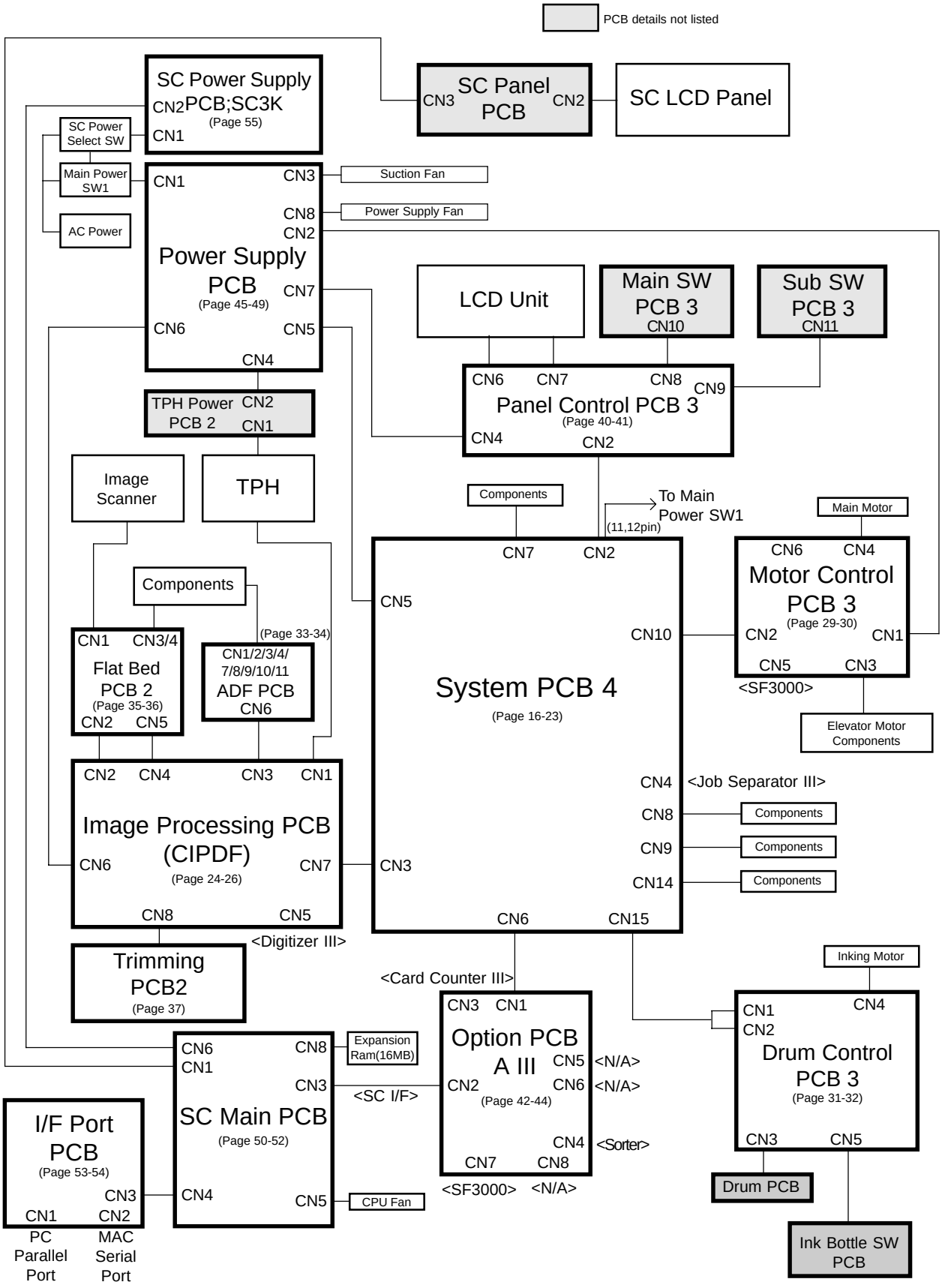
1. BLOCK CHART(2/3)

1-2. FR3950



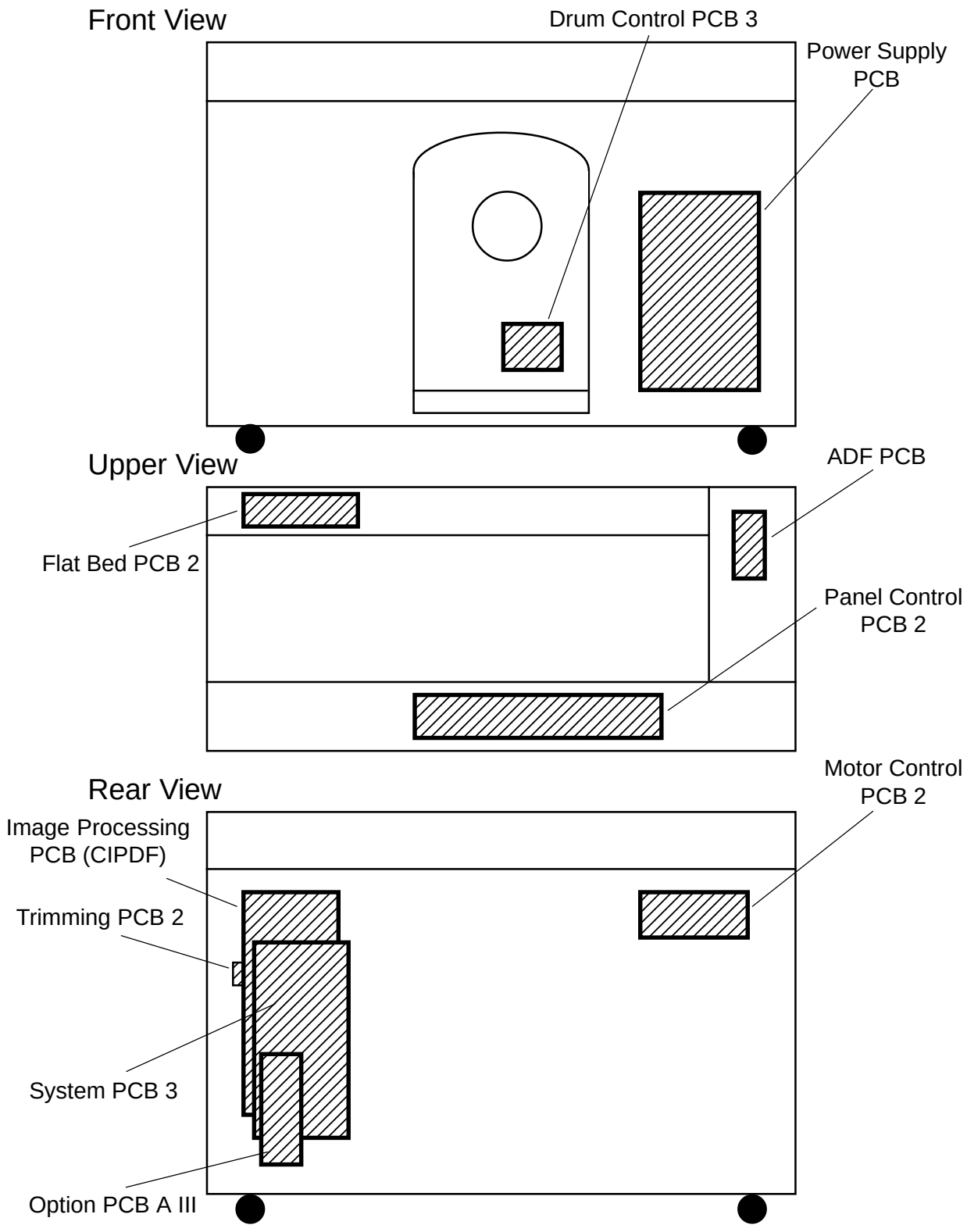
1. BLOCK CHART(3/3)

1-3. FR3950α



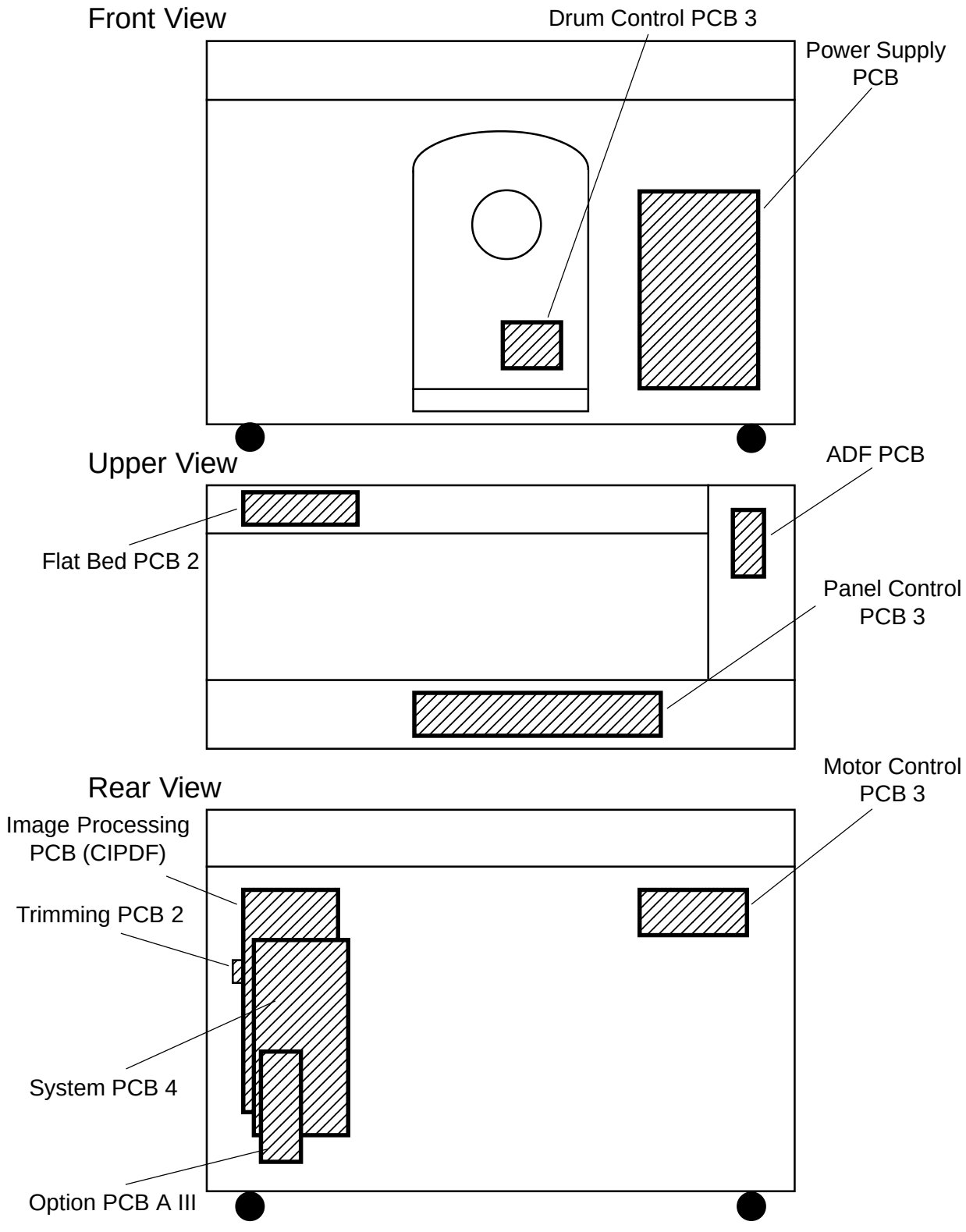
2. LOCATION OF PCBs

2-1. FR2950



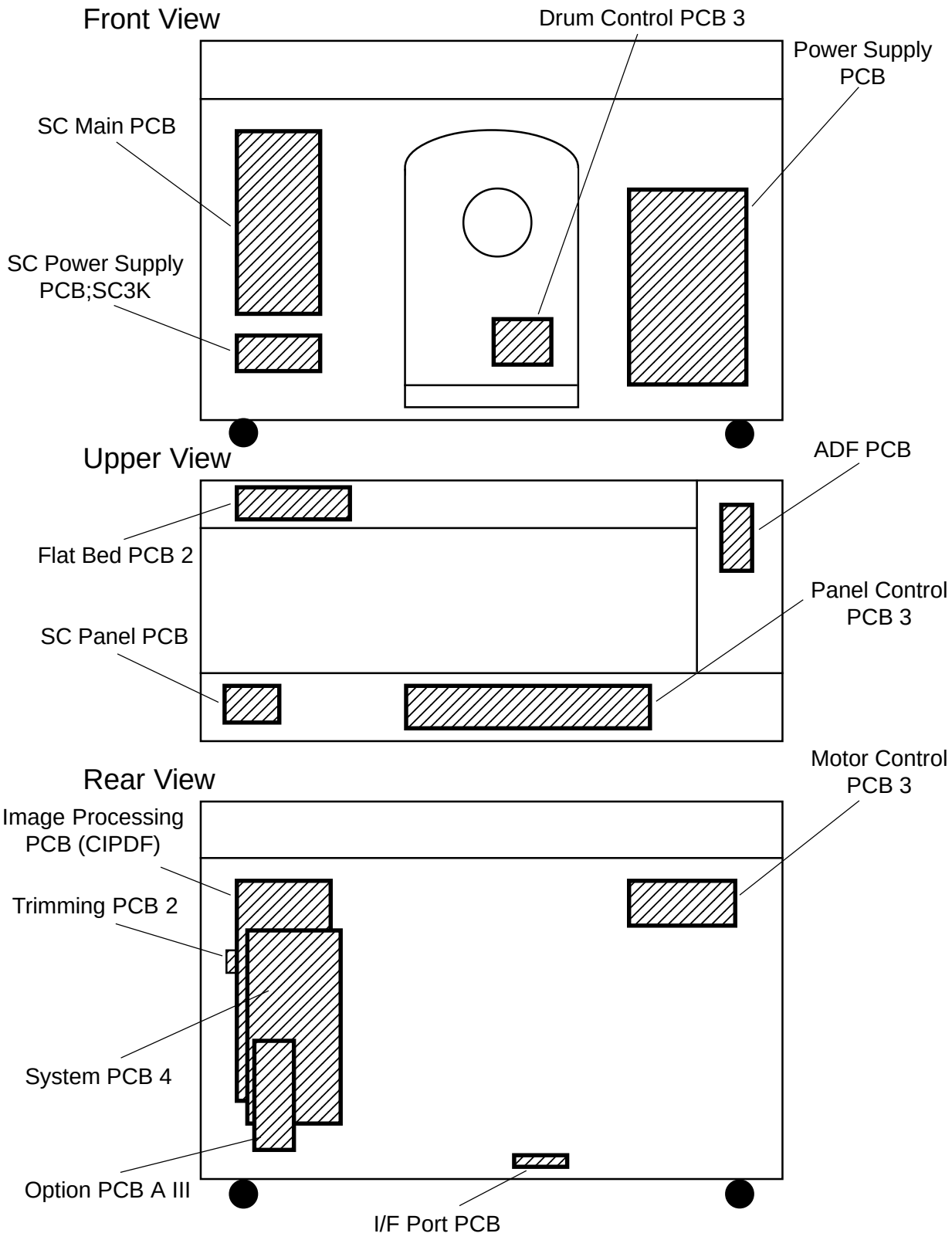
2. LOCATION OF PCBs(2/4)

2-2. FR3950



2. LOCATION OF PCBs(3/4)

2-3. FR3950α



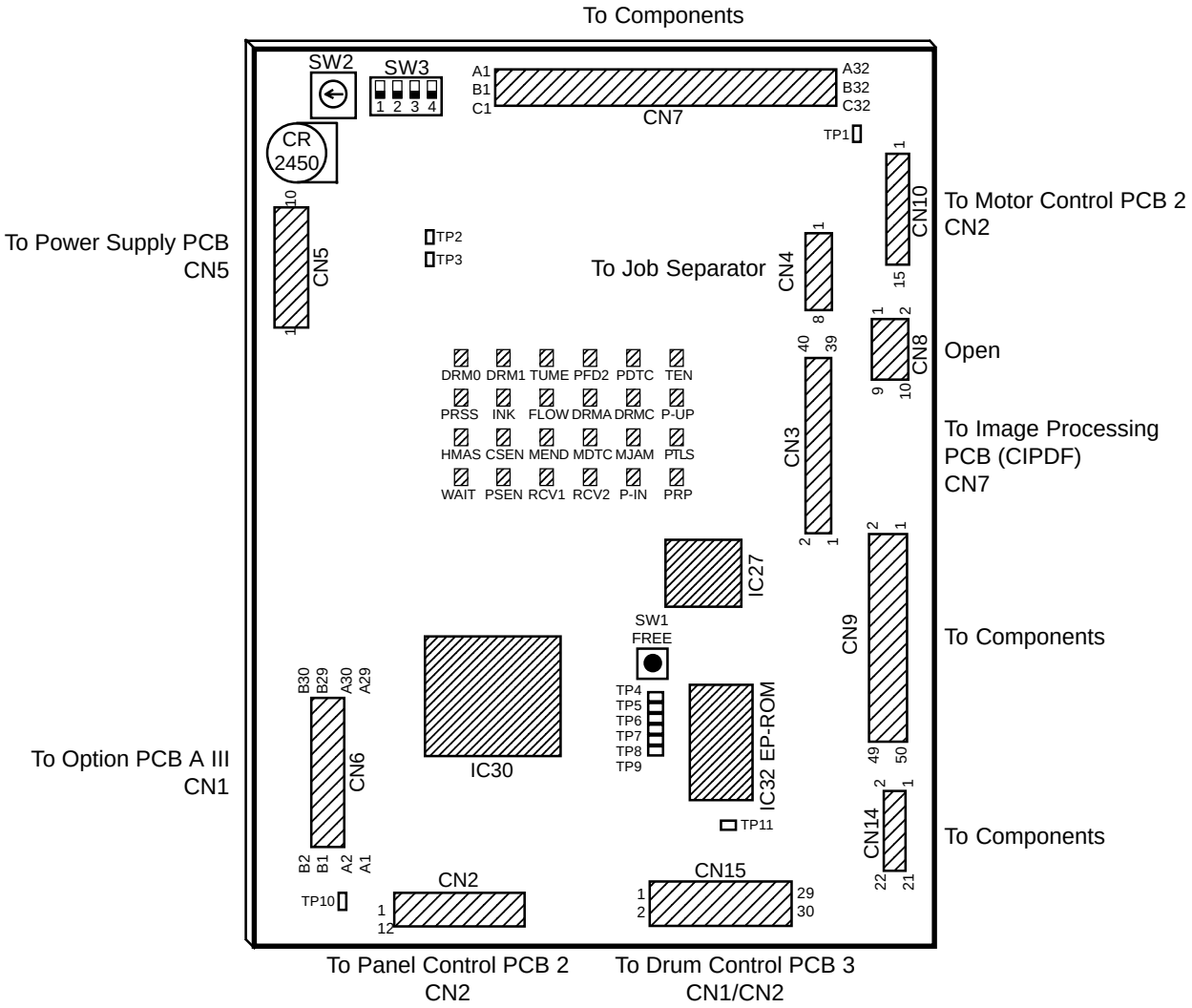
2. LOCATION OF PCBs(4/4)

2-4. PCB Function Detail

PCB Name	Function	Risograph Model
System PCB 3	Overall Control, Drive control of components	FR2950
System PCB 4	Overall Control, Drive control of components	FR3950/3950α
Image Processing PCB (CIPDF)	Processing Image data	FR2950/3950/3950α
Motor Control PCB 2	Control of Main Motor and Elevator Motor	FR2950
Motor Control PCB 3	Control of Main Motor and Elevator Motor	FR3950/3950α
Flat Bed PCB 2	Drive control of Read Pulse Motor, Junction of Sensors on Flat Bed PCB and ADF PCB	FR2950/3950/3950α
ADF PCB	Drive function of ADF unit	FR2950/3950/3950α
Panel Control PCB 2	Enter function key, Control display	FR2950
Panel Control PCB 3	Enter function key, Control display	FR3950/3950α
LCD Unit	Liquid Crystal Display (w/ Back Light)	FR2950/3950/3950α
Main SW PCB 2	Enter numeral key	FR2950
Main SW PCB 3	Enter numeral key	FR3950/3950α
Sub SW PCB 2	Enter Sub Panel function key	FR2950
Sub SW PCB 3	Enter Sub Panel function key	FR3950/3950α
Power Supply PCB (100 or 200)	Supply all voltages	FR2950/3950/3950α
TPH Power PCB 2	Supply voltage to TPH	FR3950/3950α
Drum Control PCB 3	Junction of sensors on Drum PCB, Drive Inking Motor	FR2950/3950/3950α
Trimming PCB2	Achieve image trimming function	FR2950/3950/3950α
Option PCB A III (Pre-installed on FR3950α, option for other models)	Control SC series Interface, Sorter, Card Counter,etc.	FR2950/3950/3950α
SC Main PCB	Control SC Computer Interface function	FR3950α
I/F Port PCB	Input port from PC or Mac (PC Parallel Port, MAC serial Port)	FR3950α
SC Power Supply PCB;SC3K	Supply voltage to SC Main PCB and CPU Fan	FR3950α
SC Panel PCB	Enter SC Panel function	FR3950α
SC LCD PCB	Display SC status	FR3950α

3. SYSTEM PCB

3-1. System PCB 3



SW

SW1 :Drum (Main motor) 30 rpm

SW2 :Machine Selection HEX SW
Please refer APPENDIX for the detail

SW3 :Machine Selection Dip SW
Please refer APPENDIX for the detail

LED

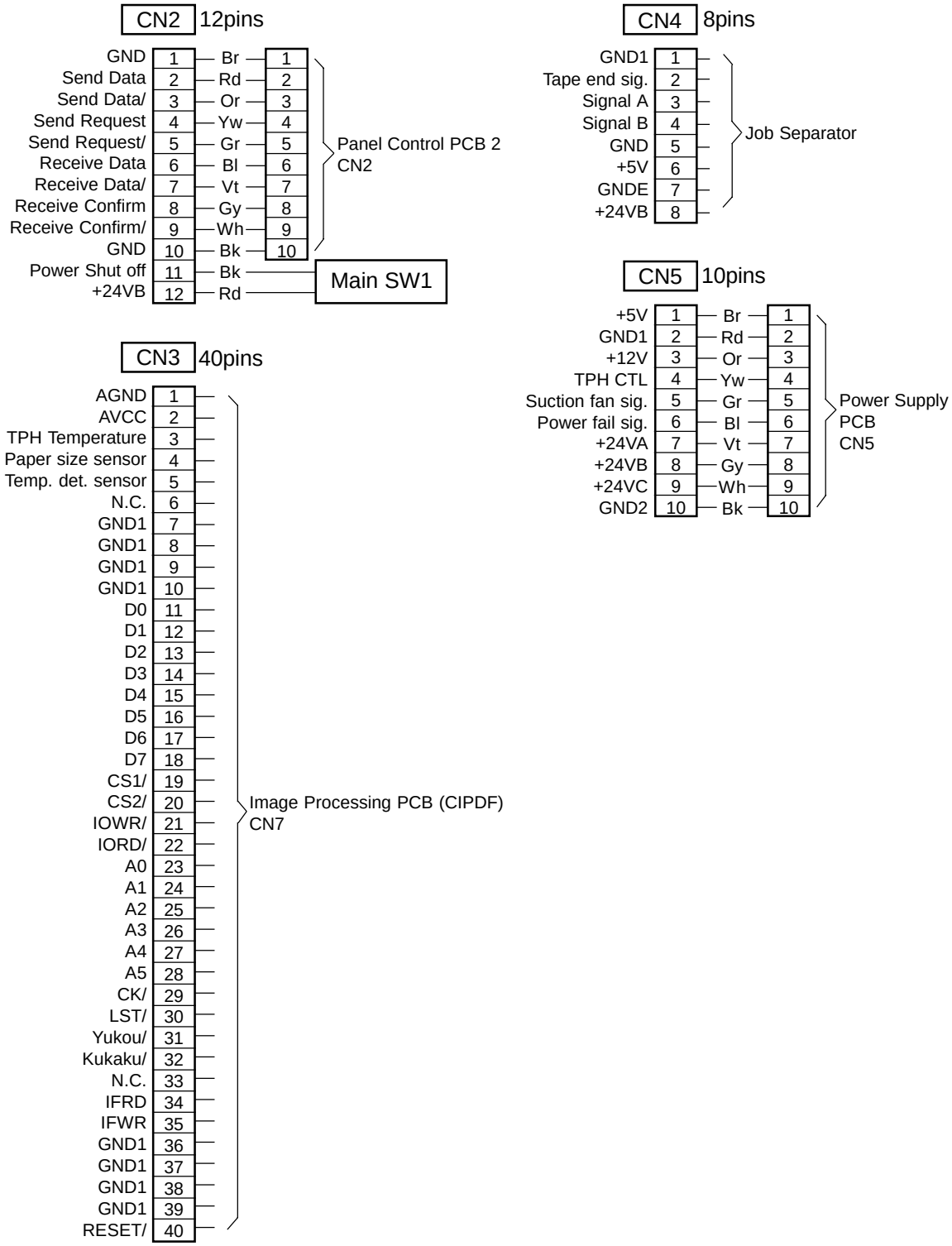
LED	Sensor Name	When LED is ON
DRM0	0 Angular Sensor	Magnetism is detected
DRM1	180 Angular Sensor	Magnetism is detected
PFD2	Paper Feed Clutch Sensor	Light path is blocked
PDTC	Paper Detection Sensor	Reflected light detected
TEN	Vertical Centering Sensor	Light path is blocked
PRSS	Pressure Detection Sensor	Light path is blocked
INK	Ink Sensor	Ink is not detected
FLOW	Overflow Sensor	Ink is not detected
DRMA	Position A Sensor	Light path is blocked
DRMC	Position C Sensor	Light path is blocked
P-UP	Elevator Upper Limit Sensor	Light path is opened (actuator pressed)
HMAS	Disposal Box Master Sensor	Light path is opened (Master not detected)
CSEN	Master Loading Sensor	Reflected light (Master) detected
MEND	Master END Sensor	Reflected light (Master) detected
MDTC	Master Detection Sensor	Reflected light (Master) not detected
MJAM	Master Removal Sensor	Light path is blocked (Master detected)
PTLS	Paper Size Detection Sensor	Reflected light (Paper) detected
WAIT	Master Positioning Sensor	Reflected light (Master) not detected
PSEN	Paper Sensor	Light path is blocked (Paper detected)
RCV1	Paper Receiving Sensor 1	Light path is blocked (Paper detected)
RCV2	Paper Receiving Sensor 2	Light path is blocked (Paper detected)
P-IN	Paper Feed Detection Sensor	Light path is blocked (Paper detected)
PRP	Pressure Control Sensor	Light path is opened
TUME	Master Removal Hook Sensor	Light path is opened

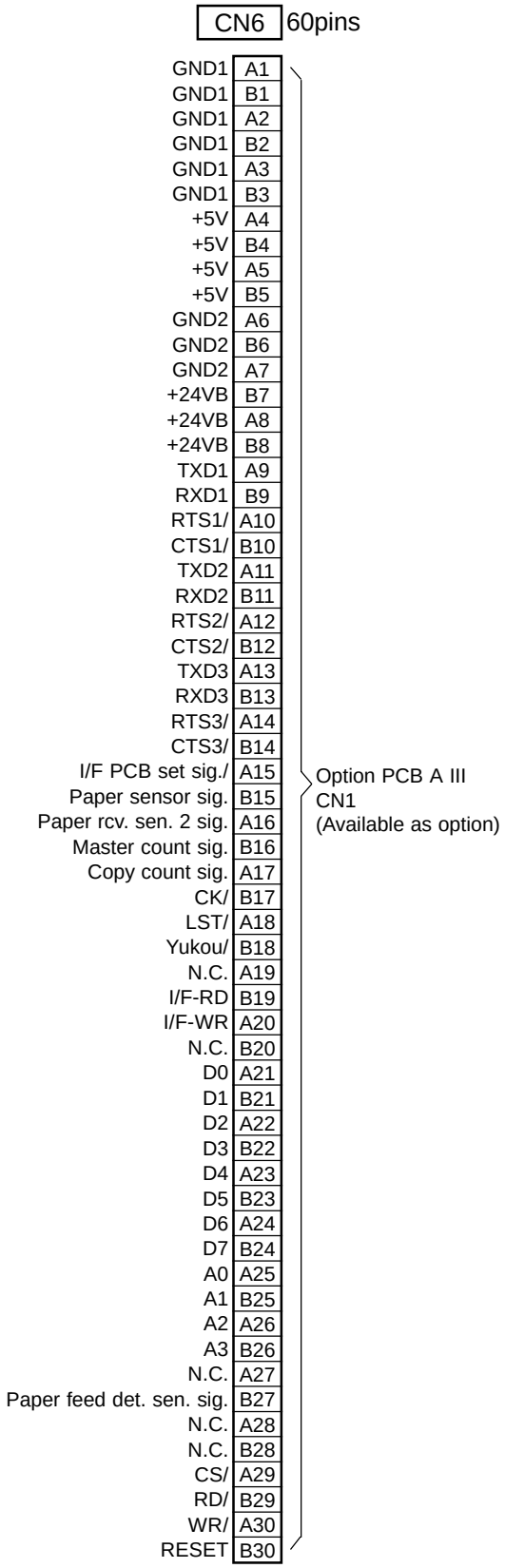
TP

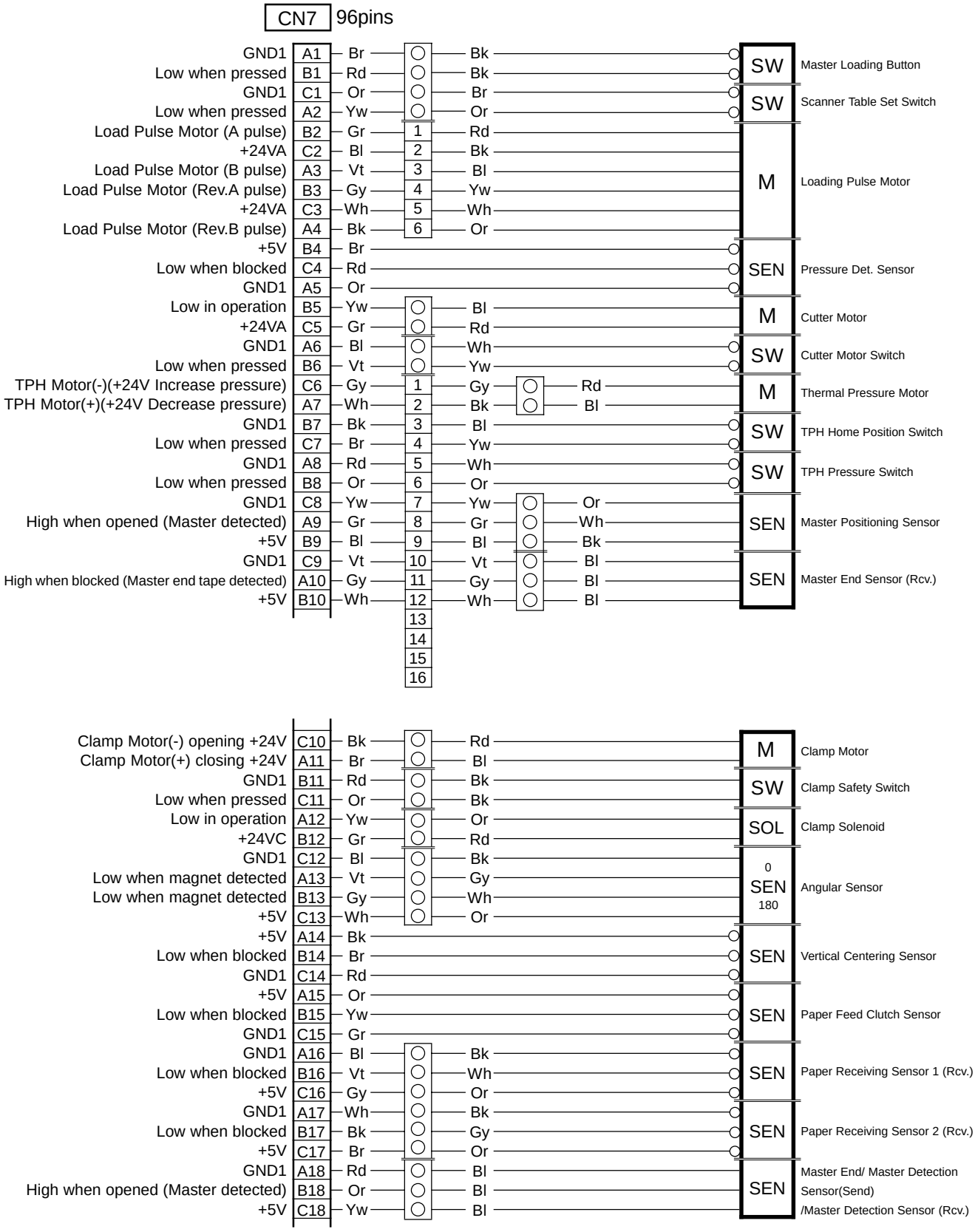
TP1 (GND)	Ground for +5V lines	TP7 (AKEN)	+5V
TP2 (GNDE)	Ground for +24V lines	TP8 (NMI)	+5V
TP3 (GND)	Ground for +5V lines	TP9 (RESET)	+5V
TP4 (PRESS)	+5V	TP10 (GND)	Ground for +5V lines
TP5 (PKEN)	+5V	TP11 (GND)	Ground for +5V lines
TP6 (CKEN)	+5V		

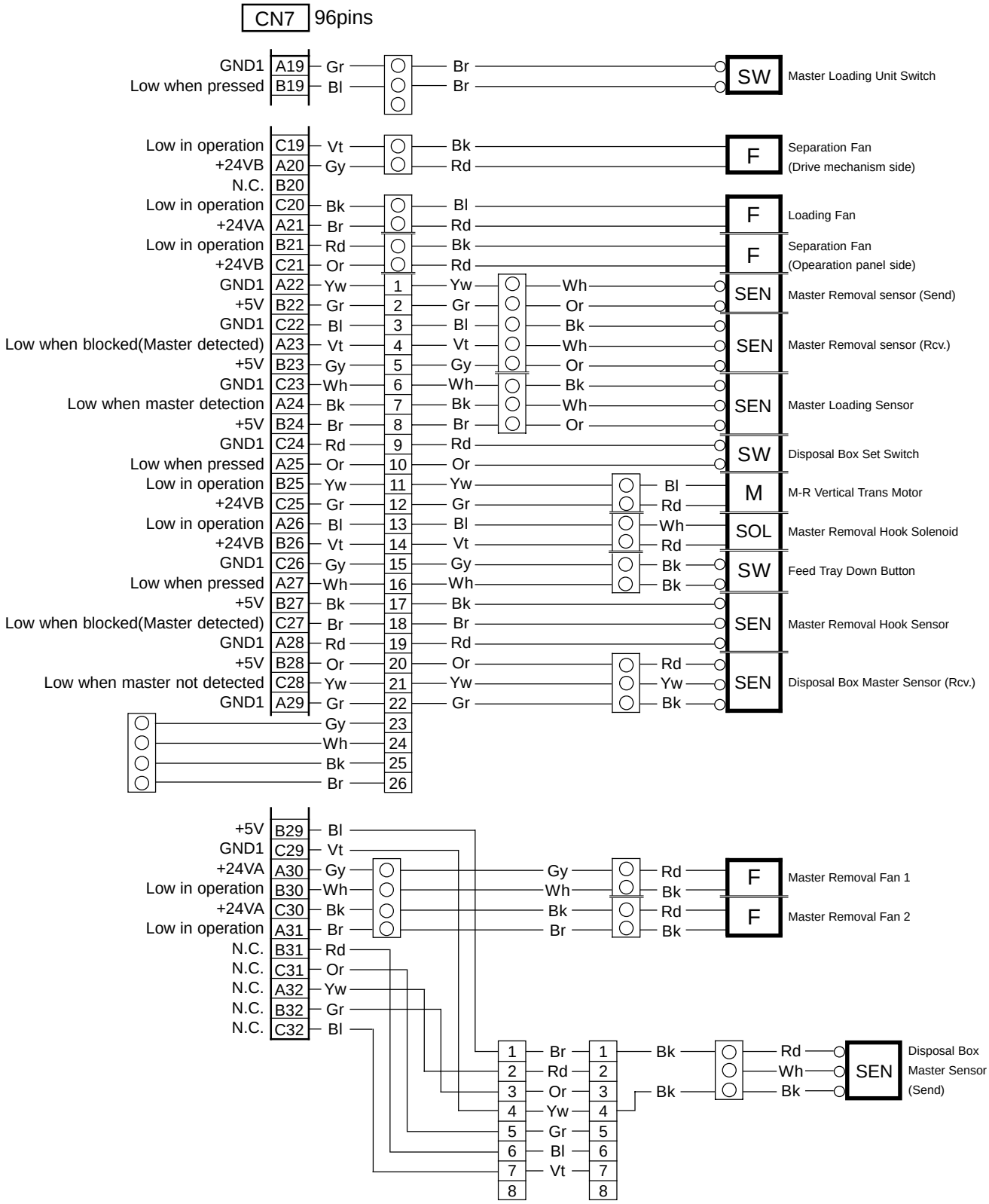
Battery

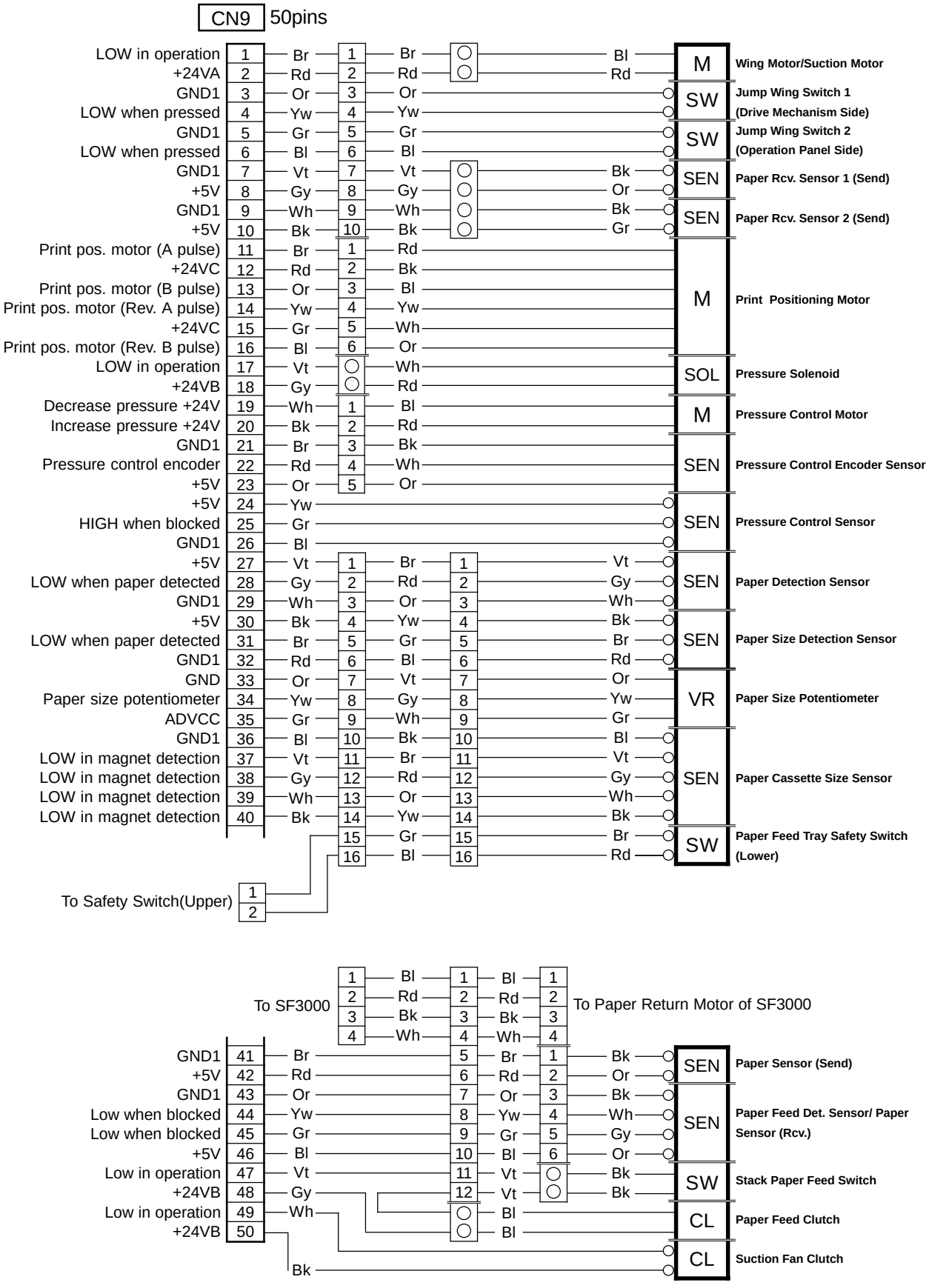
CR2450	1 piece

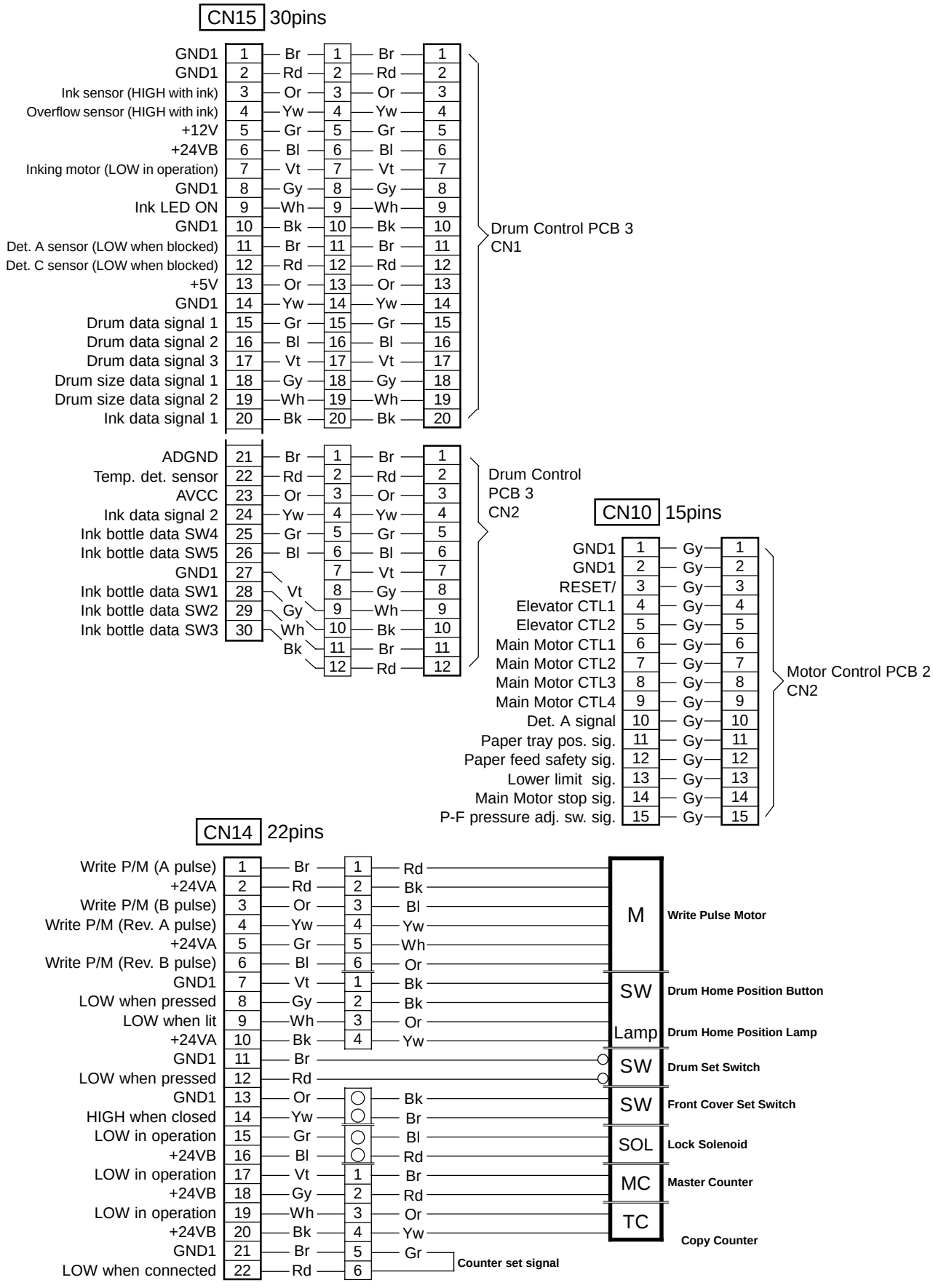

CN2 12pins
GND 1 Br 1
Send Data 2 Rd 2
Send Data/ 3 Or 3
Send Request 4 Yw 4
Send Request/ 5 Gr 5
Receive Data 6 Bl 6
Receive Data/ 7 Vt 7
Receive Confirm 8 Gy 8
Receive Confirm/ 9 Wh 9
GND 10 Bk 10
Panel Control PCB 2
CN2
Power Shut off 11 Bk
+24VB 12 Rd
Main SW1
CN4 8pins
GND1 1
Tape end sig. 2
Signal A 3
Signal B 4
GND 5
+5V 6
GNDE 7
+24VB 8
Job Separator
CN5 10pins
+5V 1 Br 1
GND1 2 Rd 2
+12V 3 Or 3
TPH CTL 4 Yw 4
Suction fan sig. 5 Gr 5
Power fail sig. 6 Bl 6
+24VA 7 Vt 7
+24VB 8 Gy 8
+24VC 9 Wh 9
GND2 10 Bk 10
Power Supply
PCB
CN5
CN3 40pins
AGND 1
AVCC 2
TPH Temperature 3
Paper size sensor 4
Temp. det. sensor 5
N.C. 6
GND1 7
GND1 8
GND1 9
GND1 10
D0 11
D1 12
D2 13
D3 14
D4 15
D5 16
D6 17
D7 18
CS1/ 19
CS2/ 20
IOWR/ 21
IORD/ 22
A0 23
A1 24
A2 25
A3 26
A4 27
A5 28
CK/ 29
LST/ 30
Yukou/ 31
Kukaku/ 32
N.C. 33
IFRD 34
IFWR 35
GND1 36
GND1 37
GND1 38
GND1 39
RESET/ 40
Image Processing PCB (CIPDF)
CN7


CN6
60pins
GND1 A1
GND1 B1
GND1 A2
GND1 B2
GND1 A3
GND1 B3
+5V A4
+5V B4
+5V A5
+5V B5
GND2 A6
GND2 B6
GND2 A7
+24VB B7
+24VB A8
+24VB B8
TXD1 A9
RXD1 B9
RTS1/ A10
CTS1/ B10
TXD2 A11
RXD2 B11
RTS2/ A12
CTS2/ B12
TXD3 A13
RXD3 B13
RTS3/ A14
CTS3/ B14
I/F PCB set sig./ A15
Paper sensor sig. B15
Paper rcv. sen. 2 sig. A16
Master count sig. B16
Copy count sig. A17
CK/ B17
LST/ A18
Yukou/ B18
N.C. A19
I/F-RD B19
I/F-WR A20
N.C. B20
D0 A21
D1 B21
D2 A22
D3 B22
D4 A23
D5 B23
D6 A24
D7 B24
A0 A25
A1 B25
A2 A26
A3 B26
N.C. A27
Paper feed det. sen. sig. B27
N.C. A28
N.C. B28
CS/ A29
RD/ B29
WR/ A30
RESET B30
Option PCB A III
CN1
(Available as option)

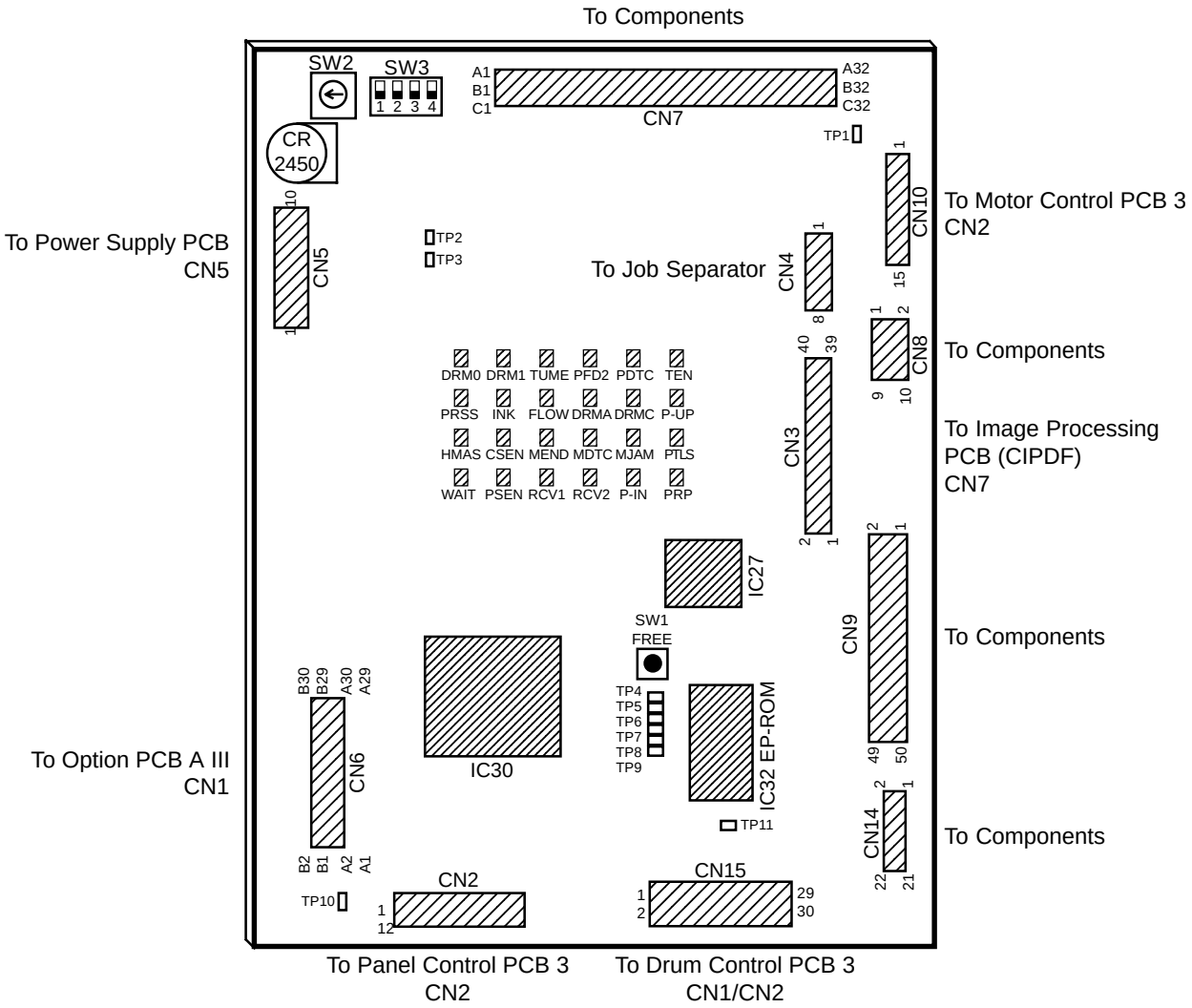

CN7 96pins
GND1 A1 Br Bk SW Master Loading Button
Low when pressed B1 Rd Bk
GND1 C1 Or Br SW Scanner Table Set Switch
Low when pressed A2 Yw Or
Load Pulse Motor (A pulse) B2 Gr 1 Rd M Loading Pulse Motor
+24VA C2 Bl 2 Bk
Load Pulse Motor (B pulse) A3 Vt 3 Bl
Load Pulse Motor (Rev.A pulse) B3 Gy 4 Yw
+24VA C3 Wh 5 Wh
Load Pulse Motor (Rev.B pulse) A4 Bk 6 Or
+5V B4 Br
Low when blocked C4 Rd SEN Pressure Det. Sensor
GND1 A5 Or
Low in operation B5 Yw Bl M Cutter Motor
+24VA C5 Gr Rd
GND1 A6 Bl Wh SW Cutter Motor Switch
Low when pressed B6 Vt Yw
TPH Motor(-)(+24V Increase pressure) C6 Gy 1 Gy Rd M Thermal Pressure Motor
TPH Motor(+)(+24V Decrease pressure) A7 Wh 2 Bk Bl
GND1 B7 Bk 3 Bl SW TPH Home Position Switch
Low when pressed C7 Br 4 Yw
GND1 A8 Rd 5 Wh SW TPH Pressure Switch
Low when pressed B8 Or 6 Or
GND1 C8 Yw 7 Yw Or SEN Master Positioning Sensor
High when opened (Master detected) A9 Gr 8 Gr Wh
+5V B9 Bl 9 Bl Bk
GND1 C9 Vt 10 Vt Bl SEN Master End Sensor (Rcv.)
High when blocked (Master end tape detected) A10 Gy 11 Gy Bl
+5V B10 Wh 12 Wh Bl
13
14
15
16
Clamp Motor(-) opening +24V C10 Bk Rd M Clamp Motor
Clamp Motor(+) closing +24V A11 Br Bl
GND1 B11 Rd Bk SW Clamp Safety Switch
Low when pressed C11 Or Bk
Low in operation A12 Yw Or SOL Clamp Solenoid
+24VC B12 Gr Rd
GND1 C12 Bl Bk 0 SEN 180 Angular Sensor
Low when magnet detected A13 Vt Gy
Low when magnet detected B13 Gy Wh
+5V C13 Wh Or
+5V A14 Bk SEN Vertical Centering Sensor
Low when blocked B14 Br
GND1 C14 Rd
+5V A15 Or SEN Paper Feed Clutch Sensor
Low when blocked B15 Yw
GND1 C15 Gr
GND1 A16 Bl Bk SEN Paper Receiving Sensor 1 (Rcv.)
Low when blocked B16 Vt Wh
+5V C16 Gy Or
GND1 A17 Wh Bk SEN Paper Receiving Sensor 2 (Rcv.)
Low when blocked B17 Bk Gy
+5V C17 Br Or
GND1 A18 Rd Bl SEN Master End/ Master Detection Sensor(Send) /Master Detection Sensor (Rcv.)
High when opened (Master detected) B18 Or Bl
+5V C18 Yw Bl


CN7 96pins
GND1 A19 Gr
Low when pressed B19 Bl
Br
Br
SW
Master Loading Unit Switch
Low in operation C19 Vt
+24VB A20 Gy
Bk
Rd
F
Separation Fan
(Drive mechanism side)
N.C. B20
Low in operation C20 Bk
+24VA A21 Br
Bl
Rd
F
Loading Fan
Low in operation B21 Rd
+24VB C21 Or
Bk
Rd
F
Separation Fan
(Opearation panel side)
GND1 A22 Yw 1
+5V B22 Gr 2
GND1 C22 Bl 3
Low when blocked(Master detected) A23 Vt 4
+5V B23 Gy 5
GND1 C23 Wh 6
Low when master detection A24 Bk 7
+5V B24 Br 8
GND1 C24 Rd 9
Low when pressed A25 Or 10
Low in operation B25 Yw 11
+24VB C25 Gr 12
Low in operation A26 Bl 13
+24VB B26 Vt 14
GND1 C26 Gy 15
Low when pressed A27 Wh 16
+5V B27 Bk 17
Low when blocked(Master detected) C27 Br 18
GND1 A28 Rd 19
+5V B28 Or 20
Low when master not detected C28 Yw 21
GND1 A29 Gr 22
Gy 23
Wh 24
Bk 25
Br 26
Yw
Gr
Bl
Vt
Gy
Wh
Bk
Br
Rd
Or
Yw
Gr
Bl
Vt
Gy
Wh
Bk
Br
Rd
Or
Yw
Gr
Wh
Or
Bk
Wh
Or
Bk
Wh
Or
Bl
Rd
Wh
Rd
Bk
Bk
Rd
Yw
Gr
SEN
Master Removal sensor (Send)
SEN
Master Removal sensor (Rcv.)
SEN
Master Loading Sensor
SW
Disposal Box Set Switch
M
M-R Vertical Trans Motor
SOL
Master Removal Hook Solenoid
SW
Feed Tray Down Button
SEN
Master Removal Hook Sensor
SEN
Disposal Box Master Sensor (Rcv.)
+5V B29 Bl
GND1 C29 Vt
+24VA A30 Gy
Low in operation B30 Wh
+24VA C30 Bk
Low in operation A31 Br
N.C. B31 Rd
N.C. C31 Or
N.C. A32 Yw
N.C. B32 Gr
N.C. C32 Bl
Gy
Wh
Bk
Br
Rd
Bk
Rd
Bk
F
Master Removal Fan 1
F
Master Removal Fan 2
1 Br
2 Rd
3 Or
4 Yw
5 Gr
6 Bl
7 Vt
8
1 Bk
2
3 Bk
4
5
6
7
8
Rd
Wh
Bk
SEN
Disposal Box
Master Sensor
(Send)


CN9 50pins
LOW in operation 1 Br 1 Br Bl M Wing Motor/Suction Motor
+24VA 2 Rd 2 Rd Rd
GND1 3 Or 3 Or SW Jump Wing Switch 1 (Drive Mechanism Side)
LOW when pressed 4 Yw 4 Yw
GND1 5 Gr 5 Gr SW Jump Wing Switch 2 (Operation Panel Side)
LOW when pressed 6 Bl 6 Bl
GND1 7 Vt 7 Vt Bk SEN Paper Rcv. Sensor 1 (Send)
+5V 8 Gy 8 Gy Or
GND1 9 Wh 9 Wh Bk SEN Paper Rcv. Sensor 2 (Send)
+5V 10 Bk 10 Bk Gr
Print pos. motor (A pulse) 11 Br 1 Rd M Print Positioning Motor
+24VC 12 Rd 2 Bk
Print pos. motor (B pulse) 13 Or 3 Bl
Print pos. motor (Rev. A pulse) 14 Yw 4 Yw
+24VC 15 Gr 5 Wh
Print pos. motor (Rev. B pulse) 16 Bl 6 Or
LOW in operation 17 Vt Wh SOL Pressure Solenoid
+24VB 18 Gy Rd
Decrease pressure +24V 19 Wh 1 Bl M Pressure Control Motor
Increase pressure +24V 20 Bk 2 Rd
GND1 21 Br 3 Bk SEN Pressure Control Encoder Sensor
Pressure control encoder 22 Rd 4 Wh
+5V 23 Or 5 Or
+5V 24 Yw SEN Pressure Control Sensor
HIGH when blocked 25 Gr
GND1 26 Bl
+5V 27 Vt 1 Br 1 Vt SEN Paper Detection Sensor
LOW when paper detected 28 Gy 2 Rd 2 Gy
GND1 29 Wh 3 Or 3 Wh
+5V 30 Bk 4 Yw 4 Bk SEN Paper Size Detection Sensor
LOW when paper detected 31 Br 5 Gr 5 Br
GND1 32 Rd 6 Bl 6 Rd
GND 33 Or 7 Vt 7 Or VR Paper Size Potentiometer
Paper size potentiometer 34 Yw 8 Gy 8 Yw
ADVCC 35 Gr 9 Wh 9 Gr
GND1 36 Bl 10 Bk 10 Bl SEN Paper Cassette Size Sensor
LOW in magnet detection 37 Vt 11 Br 11 Vt
LOW in magnet detection 38 Gy 12 Rd 12 Gy
LOW in magnet detection 39 Wh 13 Or 13 Wh
LOW in magnet detection 40 Bk 14 Yw 14 Bk
15 Gr 15 Br SW Paper Feed Tray Safety Switch (Lower)
16 Bl 16 Rd
To Safety Switch(Upper) 1 2
To SF3000 1 Bl 1 Bl 1 To Paper Return Motor of SF3000
2 Rd 2 Rd 2
3 Bk 3 Bk 3
4 Wh 4 Wh 4
GND1 41 Br 5 Br 1 Bk SEN Paper Sensor (Send)
+5V 42 Rd 6 Rd 2 Or
GND1 43 Or 7 Or 3 Bk SEN Paper Feed Det. Sensor/ Paper Sensor (Rcv.)
Low when blocked 44 Yw 8 Yw 4 Wh
Low when blocked 45 Gr 9 Gr 5 Gy
+5V 46 Bl 10 Bl 6 Or
Low in operation 47 Vt 11 Vt Bk SW Stack Paper Feed Switch
+24VB 48 Gy 12 Vt Bk
Low in operation 49 Wh Bl CL Paper Feed Clutch
+24VB 50 Bl
Bk CL Suction Fan Clutch


CN15 30pins
GND1 1 Br 1 Br 1
GND1 2 Rd 2 Rd 2
Ink sensor (HIGH with ink) 3 Or 3 Or 3
Overflow sensor (HIGH with ink) 4 Yw 4 Yw 4
+12V 5 Gr 5 Gr 5
+24VB 6 Bl 6 Bl 6
Inking motor (LOW in operation) 7 Vt 7 Vt 7
GND1 8 Gy 8 Gy 8
Ink LED ON 9 Wh 9 Wh 9
GND1 10 Bk 10 Bk 10
Det. A sensor (LOW when blocked) 11 Br 11 Br 11
Det. C sensor (LOW when blocked) 12 Rd 12 Rd 12
+5V 13 Or 13 Or 13
GND1 14 Yw 14 Yw 14
Drum data signal 1 15 Gr 15 Gr 15
Drum data signal 2 16 Bl 16 Bl 16
Drum data signal 3 17 Vt 17 Vt 17
Drum size data signal 1 18 Gy 18 Gy 18
Drum size data signal 2 19 Wh 19 Wh 19
Ink data signal 1 20 Bk 20 Bk 20
Drum Control PCB 3 CN1
ADGND 21 Br 1 Br 1
Temp. det. sensor 22 Rd 2 Rd 2
AVCC 23 Or 3 Or 3
Ink data signal 2 24 Yw 4 Yw 4
Ink bottle data SW4 25 Gr 5 Gr 5
Ink bottle data SW5 26 Bl 6 Bl 6
GND1 27 7 Vt 7
Ink bottle data SW1 28 Vt 8 Gy 8
Ink bottle data SW2 29 Gy 9 Wh 9
Ink bottle data SW3 30 Wh 10 Bk 10
Bk 11 Br 11
12 Rd 12
Drum Control PCB 3 CN2
CN10 15pins
GND1 1 Gy 1
GND1 2 Gy 2
RESET/ 3 Gy 3
Elevator CTL1 4 Gy 4
Elevator CTL2 5 Gy 5
Main Motor CTL1 6 Gy 6
Main Motor CTL2 7 Gy 7
Main Motor CTL3 8 Gy 8
Main Motor CTL4 9 Gy 9
Det. A signal 10 Gy 10
Paper tray pos. sig. 11 Gy 11
Paper feed safety sig. 12 Gy 12
Lower limit sig. 13 Gy 13
Main Motor stop sig. 14 Gy 14
P-F pressure adj. sw. sig. 15 Gy 15
Motor Control PCB 2 CN2
CN14 22pins
Write P/M (A pulse) 1 Br 1 Rd
+24VA 2 Rd 2 Bk
Write P/M (B pulse) 3 Or 3 Bl
Write P/M (Rev. A pulse) 4 Yw 4 Yw
+24VA 5 Gr 5 Wh
Write P/M (Rev. B pulse) 6 Bl 6 Or
GND1 7 Vt 1 Bk
LOW when pressed 8 Gy 2 Bk
LOW when lit 9 Wh 3 Or
+24VA 10 Bk 4 Yw
GND1 11 Br
LOW when pressed 12 Rd
GND1 13 Or Bk
HIGH when closed 14 Yw Br
LOW in operation 15 Gr Bl
+24VB 16 Bl Rd
LOW in operation 17 Vt 1 Br
+24VB 18 Gy 2 Rd
LOW in operation 19 Wh 3 Or
+24VB 20 Bk 4 Yw
GND1 21 Br 5 Gr
LOW when connected 22 Rd 6
Counter set signal
M
Write Pulse Motor
SW
Drum Home Position Button
Lamp
Drum Home Position Lamp
SW
Drum Set Switch
SW
Front Cover Set Switch
SOL
Lock Solenoid
MC
Master Counter
TC
Copy Counter

3-2. System PCB 4



SW

SW1 :Drum (Main motor) 30 rpm

SW2 :Machine Selection HEX SW
Please refer APPENDIX for the detail

SW3 :Machine Selection Dip SW
Please refer APPENDIX for the detail

LED

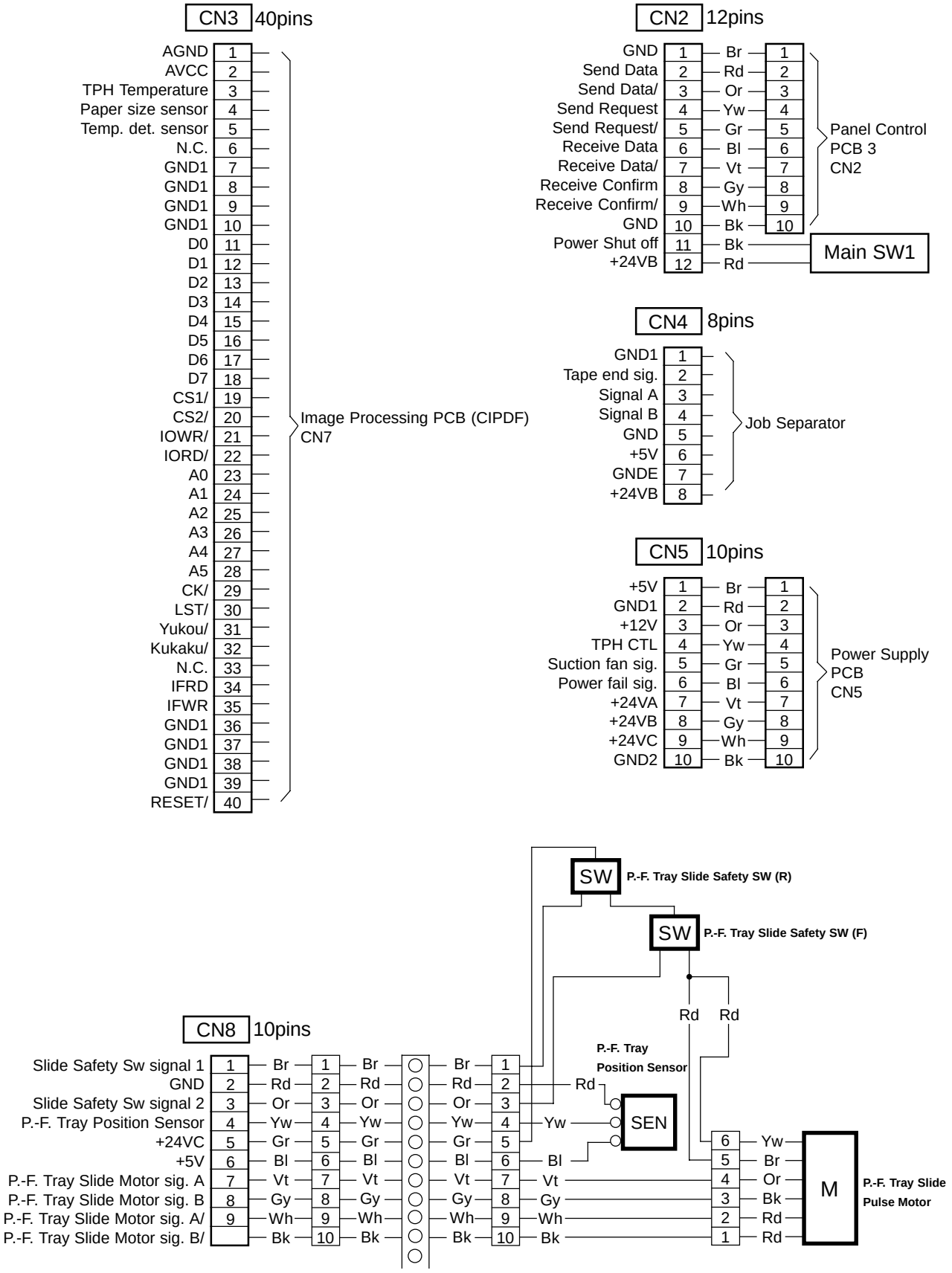
LED	Sensor Name	When LED is ON
DRM0	0 Angular Sensor	Magnetism is detected
DRM1	180 Angular Sensor	Magnetism is detected
PDTC	Paper Detection Sensor	Reflected light detected
TEN	Vertical Centering Sensor	Light path is blocked
INK	Ink Sensor	Ink is not detected
FLOW	Overflow Sensor	Ink is not detected
DRMA	Position A Sensor	Light path is blocked
DRMC	Position C Sensor	Light path is blocked
P-UP	Elevator Upper Limit Sensor	Light path is opened (actuator pressed)
HMAS	Disposal Box Master Sensor	Light path is opened (Master not detected)
CSEN	Master Loading Sensor	Reflected light (Master) detected
MEND	Master END Sensor	Reflected light (Master) detected
MDTC	Master Detection Sensor	Reflected light (Master) not detected
MJAM	Master Removal Sensor	Light path is blocked (Master detected)
PTLS	Paper Size Detection Sensor	Reflected light (Paper) detected
WAIT	Master Positioning Sensor	Reflected light (Master) not detected
PSEN	Paper Sensor	Light path is blocked (Paper detected)
RCV1	Paper Receiving Sensor 1	Light path is blocked (Paper detected)
RCV2	Paper Receiving Sensor 2	Light path is blocked (Paper detected)
P-IN	Paper Feed Detection Sensor	Light path is blocked (Paper detected)
PRP	Pressure Control Sensor	Light path is opened
TUME	Master Removal Hook Sensor	Light path is opened

TP

TP1 (GND)	Ground for +5V lines	TP7 (AKEN)	+5V
TP2 (GNDE)	Ground for +24V lines	TP8 (NMI)	+5V
TP3 (GND)	Ground for +5V lines	TP9 (RESET)	+5V
TP4 (PRESS)	+5V	TP10 (GND)	Ground for +5V lines
TP5 (PKEN)	+5V	TP11 (GND)	Ground for +5V lines
TP6 (CKEN)	+5V		

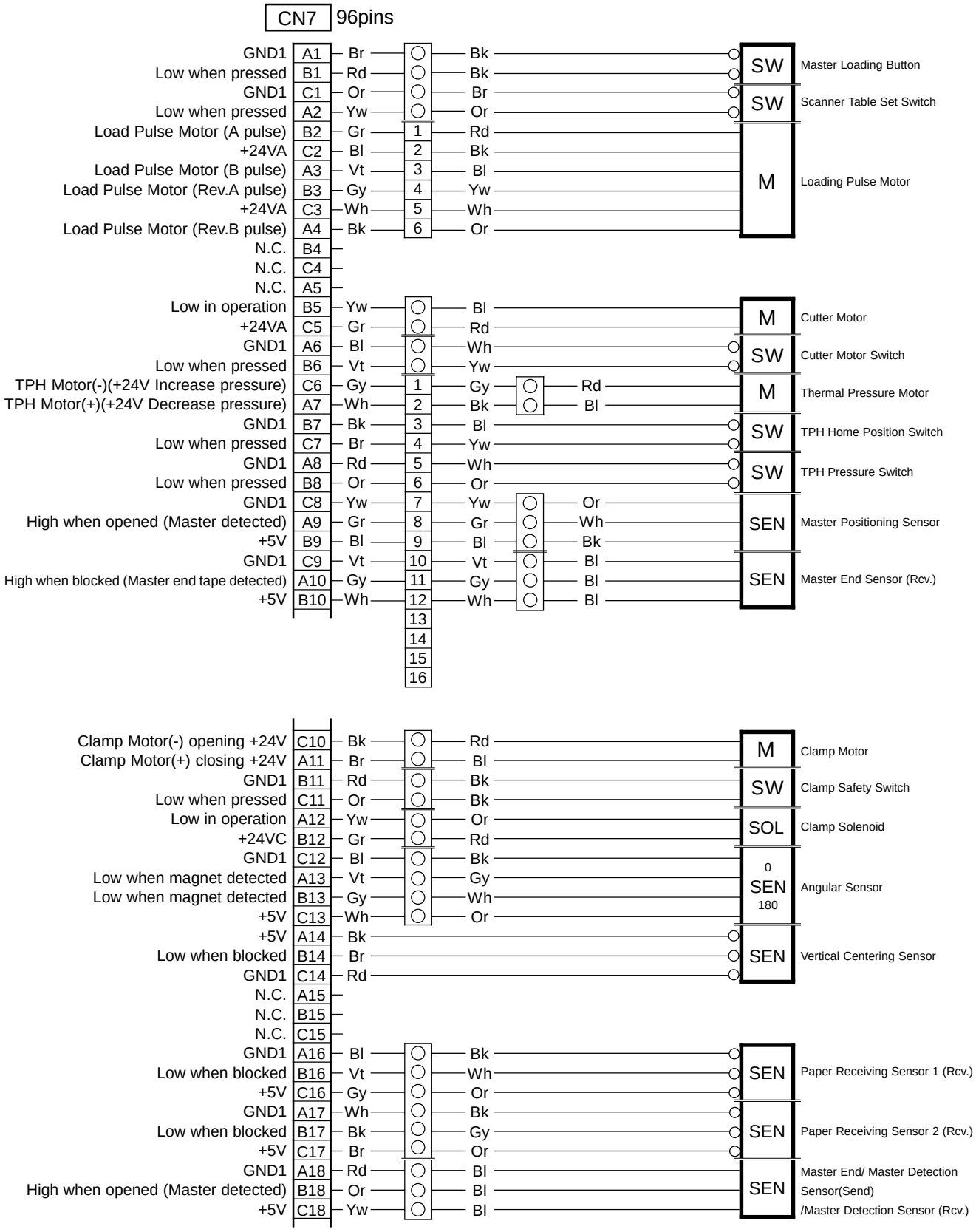
Battery

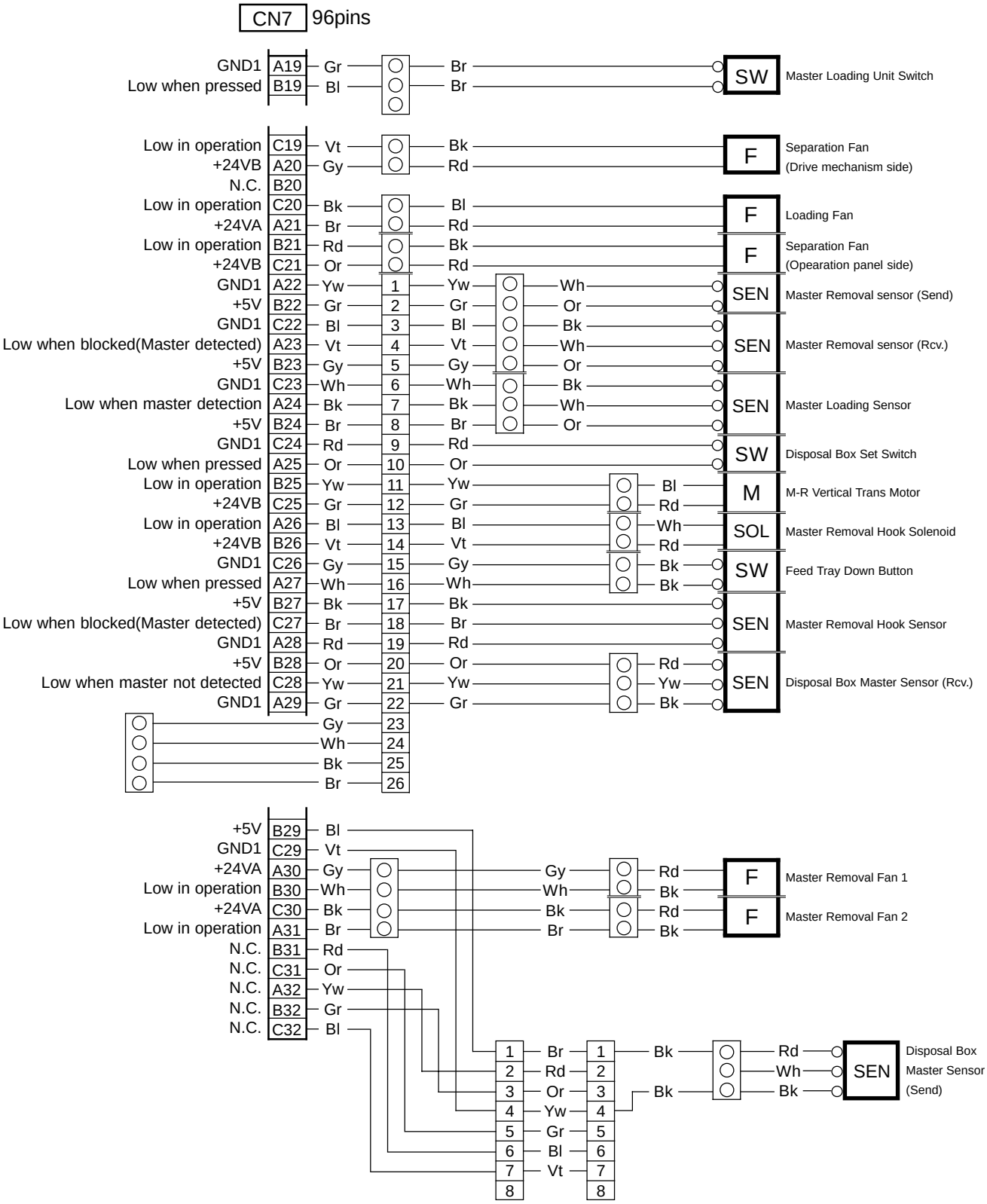
CR2450	1 piece

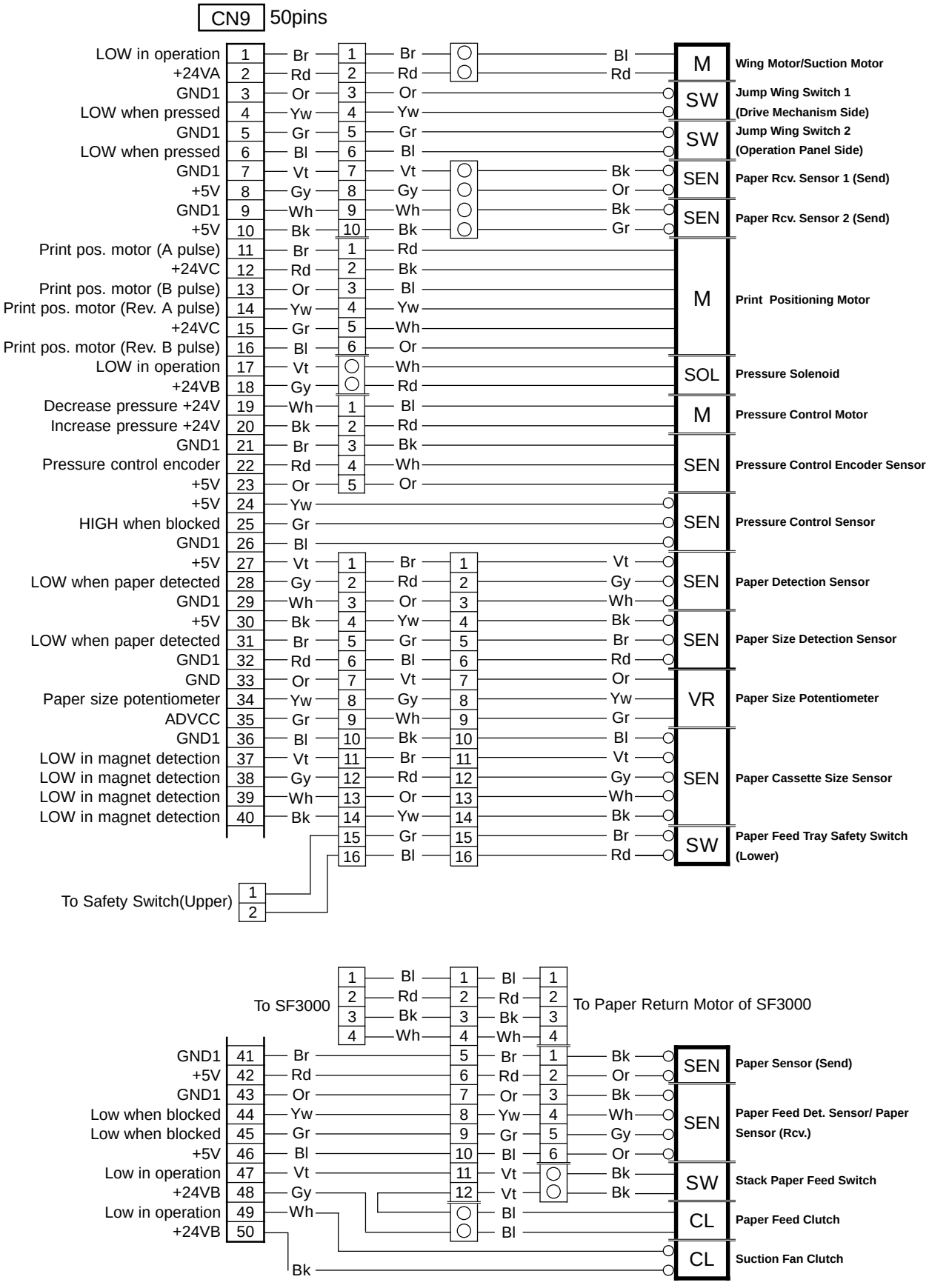

CN3 40pins
AGND 1
AVCC 2
TPH Temperature 3
Paper size sensor 4
Temp. det. sensor 5
N.C. 6
GND1 7
GND1 8
GND1 9
GND1 10
D0 11
D1 12
D2 13
D3 14
D4 15
D5 16
D6 17
D7 18
CS1/ 19
CS2/ 20
IOWR/ 21
IORD/ 22
A0 23
A1 24
A2 25
A3 26
A4 27
A5 28
CK/ 29
LST/ 30
Yukou/ 31
Kukaku/ 32
N.C. 33
IFRD 34
IFWR 35
GND1 36
GND1 37
GND1 38
GND1 39
RESET/ 40
Image Processing PCB (CIPDF)
CN7
CN2 12pins
GND 1 Br 1
Send Data 2 Rd 2
Send Data/ 3 Or 3
Send Request 4 Yw 4
Send Request/ 5 Gr 5
Receive Data 6 Bl 6
Receive Data/ 7 Vt 7
Receive Confirm 8 Gy 8
Receive Confirm/ 9 Wh 9
GND 10 Bk 10
Power Shut off 11 Bk
+24VB 12 Rd
Panel Control
PCB 3
CN2
Main SW1
CN4 8pins
GND1 1
Tape end sig. 2
Signal A 3
Signal B 4
GND 5
+5V 6
GNDE 7
+24VB 8
Job Separator
CN5 10pins
+5V 1 Br 1
GND1 2 Rd 2
+12V 3 Or 3
TPH CTL 4 Yw 4
Suction fan sig. 5 Gr 5
Power fail sig. 6 Bl 6
+24VA 7 Vt 7
+24VB 8 Gy 8
+24VC 9 Wh 9
GND2 10 Bk 10
Power Supply
PCB
CN5
SW P.-F. Tray Slide Safety SW (R)
SW P.-F. Tray Slide Safety SW (F)
Rd Rd
P.-F. Tray
Position Sensor
SEN
CN8 10pins
Slide Safety Sw signal 1 1 Br
GND 2 Rd
Slide Safety Sw signal 2 3 Or
P.-F. Tray Position Sensor 4 Yw
+24VC 5 Gr
+5V 6 Bl
P.-F. Tray Slide Motor sig. A 7 Vt
P.-F. Tray Slide Motor sig. B 8 Gy
P.-F. Tray Slide Motor sig. A/ 9 Wh
P.-F. Tray Slide Motor sig. B/ Bk 10
Rd
Yw
Bl
6 Yw
5 Br
4 Or
3 Bk
2 Rd
1 Rd
M
P.-F. Tray Slide
Pulse Motor

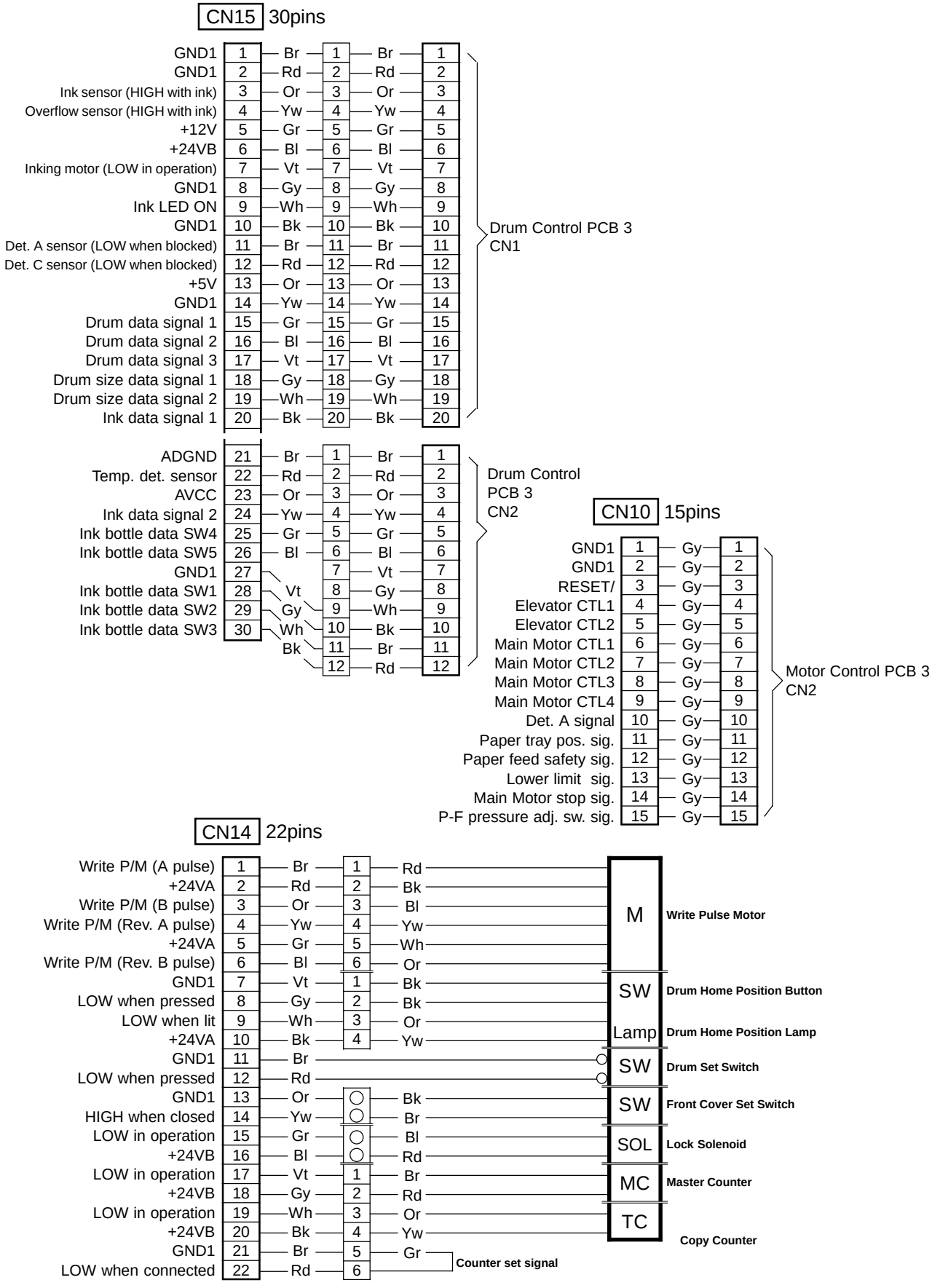
CN6 60pins

GND1	A1	
GND1	B1	
GND1	A2	
GND1	B2	
GND1	A3	
GND1	B3	
+5V	A4	
+5V	B4	
+5V	A5	
+5V	B5	
GND2	A6	
GND2	B6	
GND2	A7	
+24VB	B7	
+24VB	A8	
+24VB	B8	
TXD1	A9	
RXD1	B9	
RTS1/	A10	
CTS1/	B10	
TXD2	A11	
RXD2	B11	
RTS2/	A12	
CTS2/	B12	
TXD3	A13	
RXD3	B13	
RTS3/	A14	
CTS3/	B14	
I/F PCB set sig./	A15	Option PCB A III CN1 (FR3950α available as standard) (FR3950 available as option)
Paper sensor sig.	B15	
Paper rcv. sen. 2 sig.	A16	
Master count sig.	B16	
Copy count sig.	A17	
CK/	B17	
LST/	A18	
Yukou/	B18	
N.C.	A19	
I/F-RD	B19	
I/F-WR	A20	
N.C.	B20	
D0	A21	
D1	B21	
D2	A22	
D3	B22	
D4	A23	
D5	B23	
D6	A24	
D7	B24	
A0	A25	
A1	B25	
A2	A26	
A3	B26	
N.C.	A27	
Paper feed det. sen. sig.	B27	
N.C.	A28	
N.C.	B28	
CS/	A29	
RD/	B29	
WR/	A30	
RESET	B30	

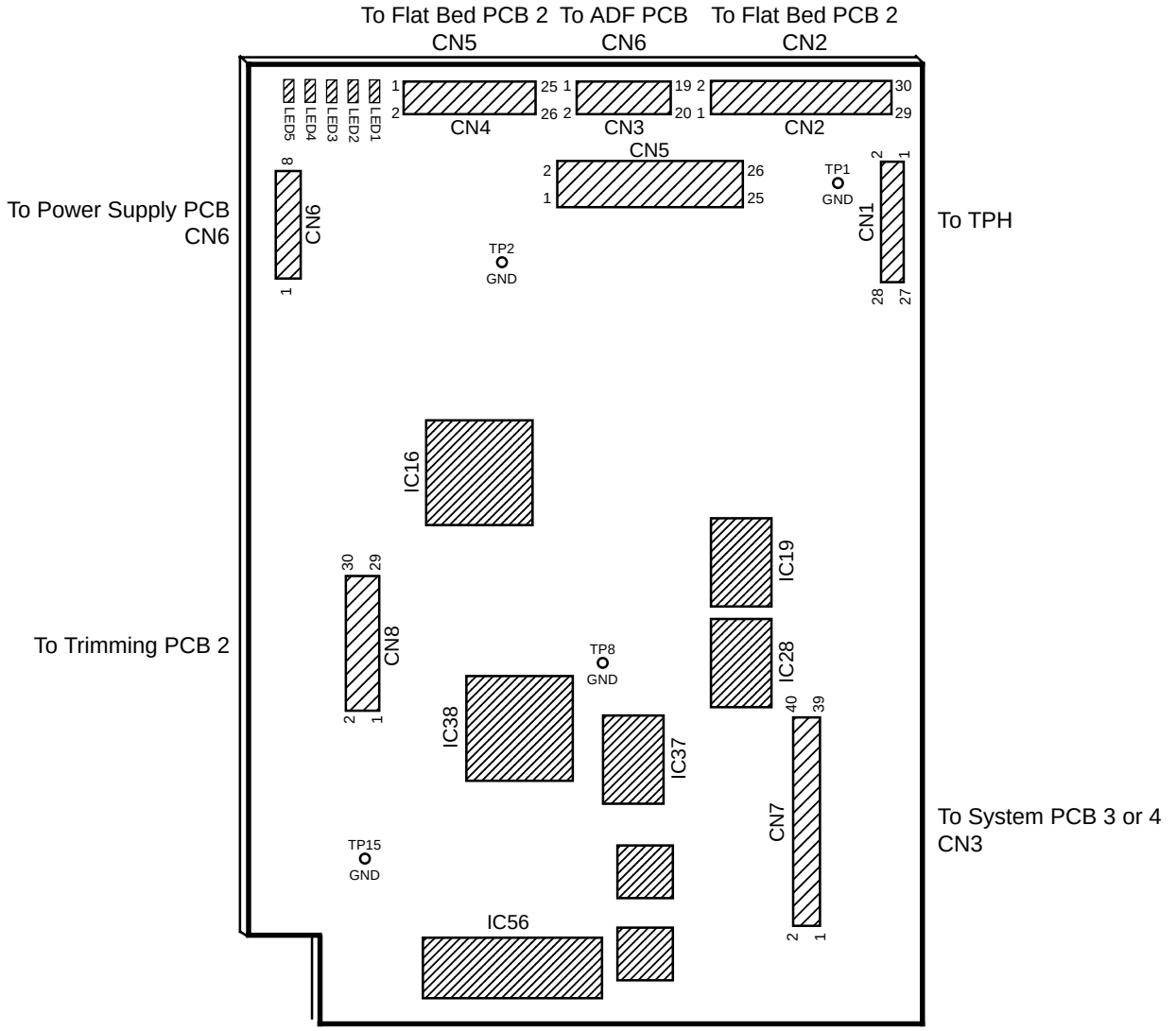

CN7 96pins
GND1 A1 Br Bk
Low when pressed B1 Rd Bk
GND1 C1 Or Br
Low when pressed A2 Yw Or
Load Pulse Motor (A pulse) B2 Gr 1 Rd
+24VA C2 Bl 2 Bk
Load Pulse Motor (B pulse) A3 Vt 3 Bl
Load Pulse Motor (Rev.A pulse) B3 Gy 4 Yw
+24VA C3 Wh 5 Wh
Load Pulse Motor (Rev.B pulse) A4 Bk 6 Or
N.C. B4
N.C. C4
N.C. A5
SW Master Loading Button
SW Scanner Table Set Switch
M Loading Pulse Motor
Low in operation B5 Yw Bl
+24VA C5 Gr Rd
GND1 A6 Bl Wh
Low when pressed B6 Vt Yw
TPH Motor(-)(+24V Increase pressure) C6 Gy 1 Gy Rd
TPH Motor(+)(+24V Decrease pressure) A7 Wh 2 Bk Bl
GND1 B7 Bk 3 Bl
Low when pressed C7 Br 4 Yw
GND1 A8 Rd 5 Wh
Low when pressed B8 Or 6 Or
GND1 C8 Yw 7 Yw Or
High when opened (Master detected) A9 Gr 8 Gr Wh
+5V B9 Bl 9 Bl Bk
GND1 C9 Vt 10 Vt Bl
High when blocked (Master end tape detected) A10 Gy 11 Gy Bl
+5V B10 Wh 12 Wh Bl
13
14
15
16
M Cutter Motor
SW Cutter Motor Switch
M Thermal Pressure Motor
SW TPH Home Position Switch
SW TPH Pressure Switch
SEN Master Positioning Sensor
SEN Master End Sensor (Rcv.)
Clamp Motor(-) opening +24V C10 Bk Rd
Clamp Motor(+) closing +24V A11 Br Bl
GND1 B11 Rd Bk
Low when pressed C11 Or Bk
Low in operation A12 Yw Or
+24VC B12 Gr Rd
GND1 C12 Bl Bk
Low when magnet detected A13 Vt Gy
Low when magnet detected B13 Gy Wh
+5V C13 Wh Or
+5V A14 Bk
Low when blocked B14 Br
GND1 C14 Rd
N.C. A15
N.C. B15
N.C. C15
M Clamp Motor
SW Clamp Safety Switch
SOL Clamp Solenoid
0
SEN Angular Sensor
180
SEN Vertical Centering Sensor
GND1 A16 Bl Bk
Low when blocked B16 Vt Wh
+5V C16 Gy Or
GND1 A17 Wh Bk
Low when blocked B17 Bk Gy
+5V C17 Br Or
GND1 A18 Rd Bl
High when opened (Master detected) B18 Or Bl
+5V C18 Yw Bl
SEN Paper Receiving Sensor 1 (Rcv.)
SEN Paper Receiving Sensor 2 (Rcv.)
SEN Master End/ Master Detection Sensor(Send) /Master Detection Sensor (Rcv.)


CN7 96pins
GND1 A19 Gr
Low when pressed B19 Bl
Br
Br
SW
Master Loading Unit Switch
Low in operation C19 Vt
+24VB A20 Gy
Bk
Rd
F
Separation Fan
(Drive mechanism side)
N.C. B20
Low in operation C20 Bk
+24VA A21 Br
Low in operation B21 Rd
+24VB C21 Or
Bl
Rd
Bk
Rd
F
Loading Fan
F
Separation Fan
(Opearation panel side)
GND1 A22 Yw
+5V B22 Gr
GND1 C22 Bl
Low when blocked(Master detected) A23 Vt
+5V B23 Gy
GND1 C23 Wh
Low when master detection A24 Bk
+5V B24 Br
GND1 C24 Rd
Low when pressed A25 Or
Low in operation B25 Yw
+24VB C25 Gr
Low in operation A26 Bl
+24VB B26 Vt
GND1 C26 Gy
Low when pressed A27 Wh
+5V B27 Bk
Low when blocked(Master detected) C27 Br
GND1 A28 Rd
+5V B28 Or
Low when master not detected C28 Yw
GND1 A29 Gr
Gy 23
Wh 24
Bk 25
Br 26
1 Yw
2 Gr
3 Bl
4 Vt
5 Gy
6 Wh
7 Bk
8 Br
Wh
Or
Bk
Wh
Or
Bk
Wh
Or
SEN
Master Removal sensor (Send)
SEN
Master Removal sensor (Rcv.)
SEN
Master Loading Sensor
SW
Disposal Box Set Switch
Rd
Or
Yw
Gr
Bl
Rd
Wh
Rd
Bk
Bk
M
M-R Vertical Trans Motor
SOL
Master Removal Hook Solenoid
SW
Feed Tray Down Button
SEN
Master Removal Hook Sensor
Rd
Yw
Bk
SEN
Disposal Box Master Sensor (Rcv.)
+5V B29 Bl
GND1 C29 Vt
+24VA A30 Gy
Low in operation B30 Wh
+24VA C30 Bk
Low in operation A31 Br
N.C. B31 Rd
N.C. C31 Or
N.C. A32 Yw
N.C. B32 Gr
N.C. C32 Bl
Gy
Wh
Bk
Br
Rd
Bk
Rd
Bk
F
Master Removal Fan 1
F
Master Removal Fan 2
1 Br
2 Rd
3 Or
4 Yw
5 Gr
6 Bl
7 Vt
8
1
2
3
4
5
6
7
8
Bk
Bk
Rd
Wh
Bk
SEN
Disposal Box
Master Sensor
(Send)


CN9 50pins
LOW in operation 1 Br 1 Br Bl M Wing Motor/Suction Motor
+24VA 2 Rd 2 Rd Rd
GND1 3 Or 3 Or SW Jump Wing Switch 1 (Drive Mechanism Side)
LOW when pressed 4 Yw 4 Yw
GND1 5 Gr 5 Gr SW Jump Wing Switch 2 (Operation Panel Side)
LOW when pressed 6 Bl 6 Bl
GND1 7 Vt 7 Vt Bk SEN Paper Rcv. Sensor 1 (Send)
+5V 8 Gy 8 Gy Or
GND1 9 Wh 9 Wh Bk SEN Paper Rcv. Sensor 2 (Send)
+5V 10 Bk 10 Bk Gr
Print pos. motor (A pulse) 11 Br 1 Rd M Print Positioning Motor
+24VC 12 Rd 2 Bk
Print pos. motor (B pulse) 13 Or 3 Bl
Print pos. motor (Rev. A pulse) 14 Yw 4 Yw
+24VC 15 Gr 5 Wh
Print pos. motor (Rev. B pulse) 16 Bl 6 Or
LOW in operation 17 Vt Wh SOL Pressure Solenoid
+24VB 18 Gy Rd
Decrease pressure +24V 19 Wh 1 Bl M Pressure Control Motor
Increase pressure +24V 20 Bk 2 Rd
GND1 21 Br 3 Bk SEN Pressure Control Encoder Sensor
Pressure control encoder 22 Rd 4 Wh
+5V 23 Or 5 Or
+5V 24 Yw SEN Pressure Control Sensor
HIGH when blocked 25 Gr
GND1 26 Bl
+5V 27 Vt 1 Br 1 Vt SEN Paper Detection Sensor
LOW when paper detected 28 Gy 2 Rd 2 Gy
GND1 29 Wh 3 Or 3 Wh
+5V 30 Bk 4 Yw 4 Bk SEN Paper Size Detection Sensor
LOW when paper detected 31 Br 5 Gr 5 Br
GND1 32 Rd 6 Bl 6 Rd
GND 33 Or 7 Vt 7 Or VR Paper Size Potentiometer
Paper size potentiometer 34 Yw 8 Gy 8 Yw
ADVCC 35 Gr 9 Wh 9 Gr
GND1 36 Bl 10 Bk 10 Bl SEN Paper Cassette Size Sensor
LOW in magnet detection 37 Vt 11 Br 11 Vt
LOW in magnet detection 38 Gy 12 Rd 12 Gy
LOW in magnet detection 39 Wh 13 Or 13 Wh
LOW in magnet detection 40 Bk 14 Yw 14 Bk
15 Gr 15 Br SW Paper Feed Tray Safety Switch (Lower)
16 Bl 16 Rd
To Safety Switch(Upper) 1 2
To SF3000 1 Bl 1 Bl 1 To Paper Return Motor of SF3000
2 Rd 2 Rd 2
3 Bk 3 Bk 3
4 Wh 4 Wh 4
GND1 41 Br 5 Br 1 Bk SEN Paper Sensor (Send)
+5V 42 Rd 6 Rd 2 Or
GND1 43 Or 7 Or 3 Bk SEN Paper Feed Det. Sensor/ Paper Sensor (Rcv.)
Low when blocked 44 Yw 8 Yw 4 Wh
Low when blocked 45 Gr 9 Gr 5 Gy
+5V 46 Bl 10 Bl 6 Or
Low in operation 47 Vt 11 Vt Bk SW Stack Paper Feed Switch
+24VB 48 Gy 12 Vt Bk
Low in operation 49 Wh Bl CL Paper Feed Clutch
+24VB 50 Bl
Bk CL Suction Fan Clutch


CN15 30pins
GND1 1 Br 1 Br 1
GND1 2 Rd 2 Rd 2
Ink sensor (HIGH with ink) 3 Or 3 Or 3
Overflow sensor (HIGH with ink) 4 Yw 4 Yw 4
+12V 5 Gr 5 Gr 5
+24VB 6 Bl 6 Bl 6
Inking motor (LOW in operation) 7 Vt 7 Vt 7
GND1 8 Gy 8 Gy 8
Ink LED ON 9 Wh 9 Wh 9
GND1 10 Bk 10 Bk 10
Det. A sensor (LOW when blocked) 11 Br 11 Br 11
Det. C sensor (LOW when blocked) 12 Rd 12 Rd 12
+5V 13 Or 13 Or 13
GND1 14 Yw 14 Yw 14
Drum data signal 1 15 Gr 15 Gr 15
Drum data signal 2 16 Bl 16 Bl 16
Drum data signal 3 17 Vt 17 Vt 17
Drum size data signal 1 18 Gy 18 Gy 18
Drum size data signal 2 19 Wh 19 Wh 19
Ink data signal 1 20 Bk 20 Bk 20
Drum Control PCB 3 CN1
ADGND 21 Br 1 Br 1
Temp. det. sensor 22 Rd 2 Rd 2
AVCC 23 Or 3 Or 3
Ink data signal 2 24 Yw 4 Yw 4
Ink bottle data SW4 25 Gr 5 Gr 5
Ink bottle data SW5 26 Bl 6 Bl 6
GND1 27 7 Vt 7
Ink bottle data SW1 28 Vt 8 Gy 8
Ink bottle data SW2 29 Gy 9 Wh 9
Ink bottle data SW3 30 Wh 10 Bk 10
Bk 11 Br 11
12 Rd 12
Drum Control PCB 3 CN2
CN10 15pins
GND1 1 Gy 1
GND1 2 Gy 2
RESET/ 3 Gy 3
Elevator CTL1 4 Gy 4
Elevator CTL2 5 Gy 5
Main Motor CTL1 6 Gy 6
Main Motor CTL2 7 Gy 7
Main Motor CTL3 8 Gy 8
Main Motor CTL4 9 Gy 9
Det. A signal 10 Gy 10
Paper tray pos. sig. 11 Gy 11
Paper feed safety sig. 12 Gy 12
Lower limit sig. 13 Gy 13
Main Motor stop sig. 14 Gy 14
P-F pressure adj. sw. sig. 15 Gy 15
Motor Control PCB 3 CN2
CN14 22pins
Write P/M (A pulse) 1 Br 1 Rd
+24VA 2 Rd 2 Bk
Write P/M (B pulse) 3 Or 3 Bl
Write P/M (Rev. A pulse) 4 Yw 4 Yw
+24VA 5 Gr 5 Wh
Write P/M (Rev. B pulse) 6 Bl 6 Or
GND1 7 Vt 1 Bk
LOW when pressed 8 Gy 2 Bk
LOW when lit 9 Wh 3 Or
+24VA 10 Bk 4 Yw
GND1 11 Br
LOW when pressed 12 Rd
GND1 13 Or Bk
HIGH when closed 14 Yw Br
LOW in operation 15 Gr Bl
+24VB 16 Bl Rd
LOW in operation 17 Vt 1 Br
+24VB 18 Gy 2 Rd
LOW in operation 19 Wh 3 Or
+24VB 20 Bk 4 Yw
GND1 21 Br 5 Gr
LOW when connected 22 Rd 6
Counter set signal
M
Write Pulse Motor
SW
Drum Home Position Button
Lamp
Drum Home Position Lamp
SW
Drum Set Switch
SW
Front Cover Set Switch
SOL
Lock Solenoid
MC
Master Counter
TC
Copy Counter

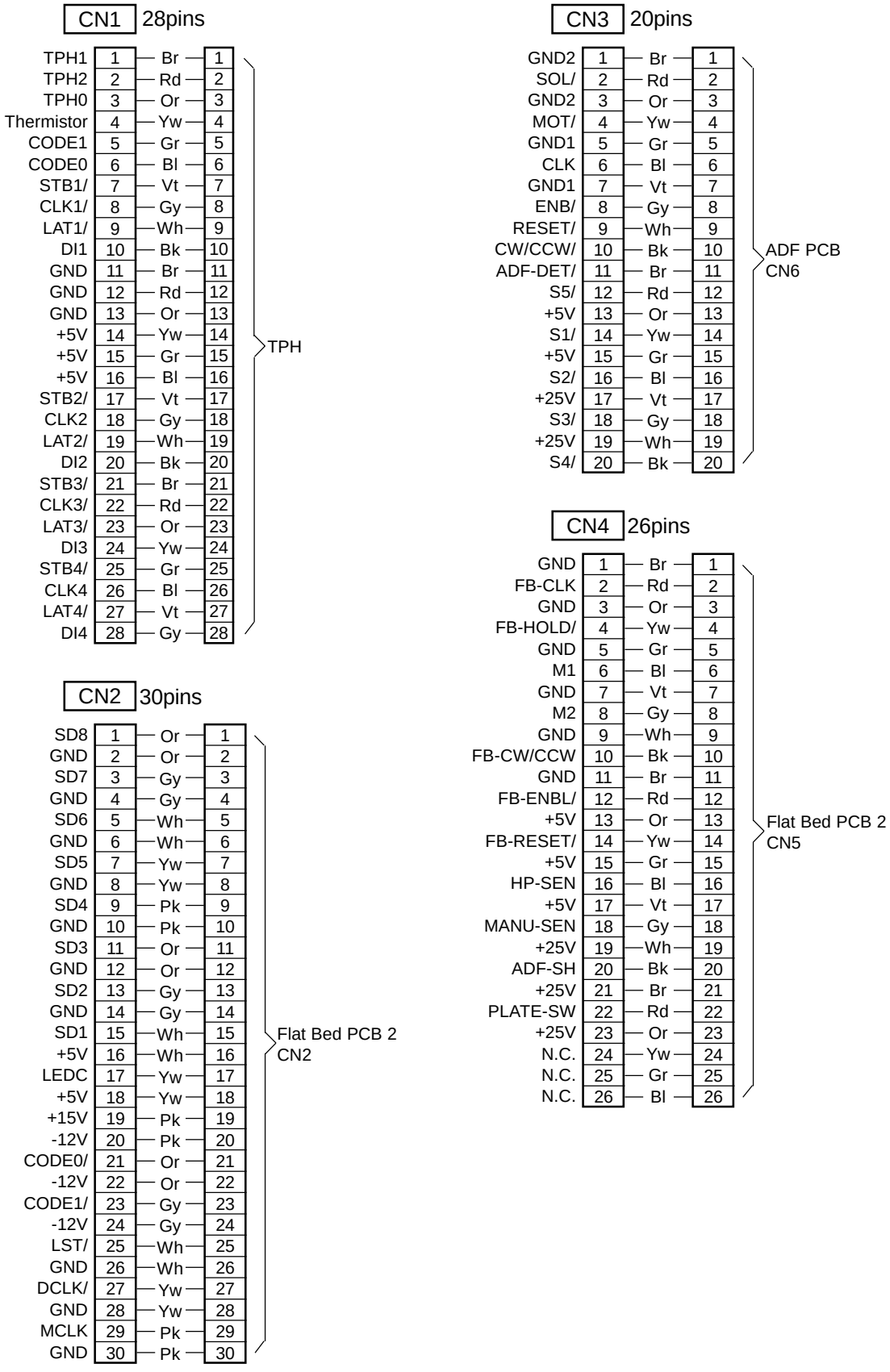
4. IMAGE PROCESSING PCB (CIPDF)



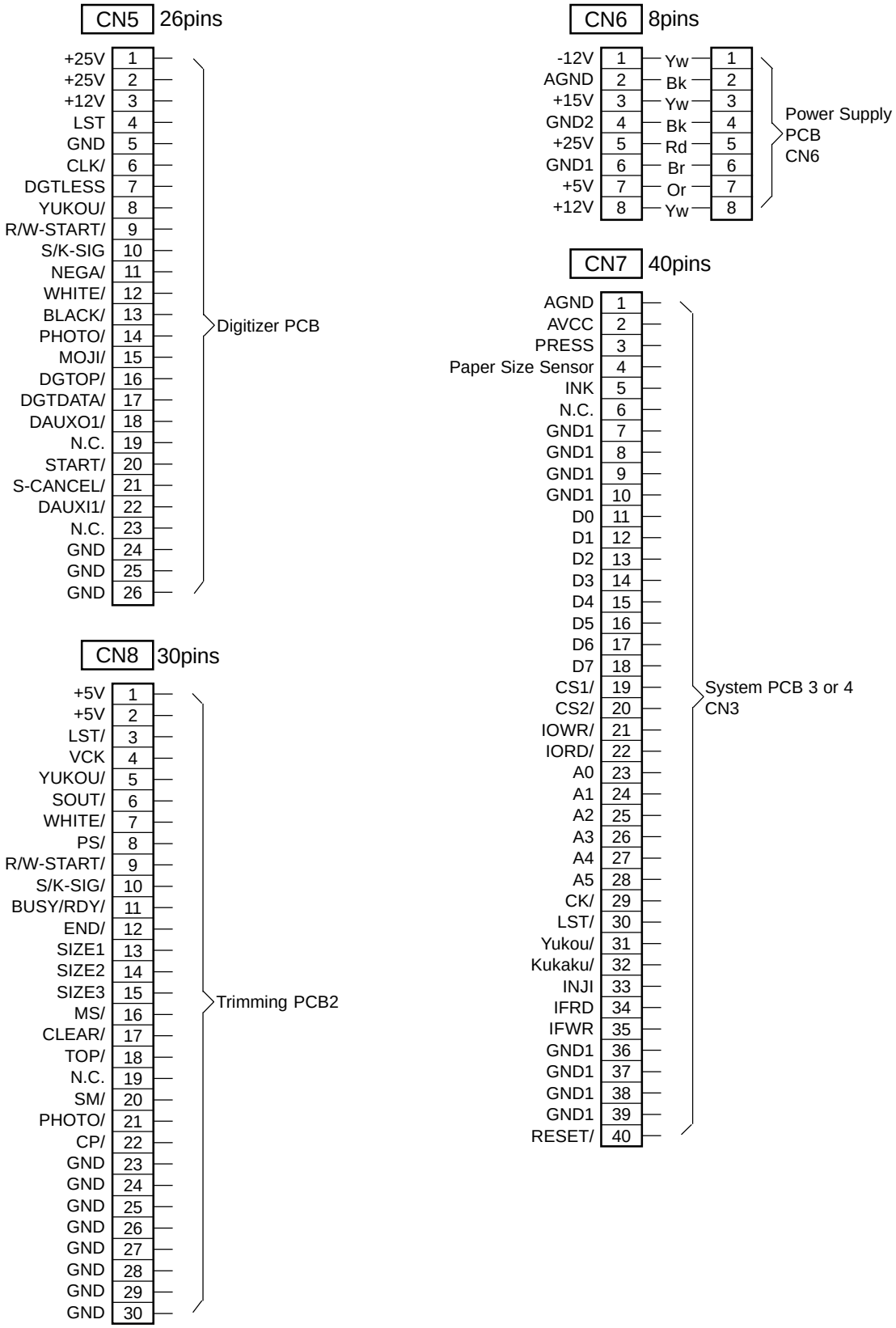
LED	
LED1	:+5V
LED2	:-12VA
LED3	:+15VA
LED4	:+12V
LED5	:+24V

TPH	
TP1	:GND
TP2	:GND
TP8	:GND
TP15	:GND

4. IMAGE PROCESSING PCB (CIPDF)(2/3)

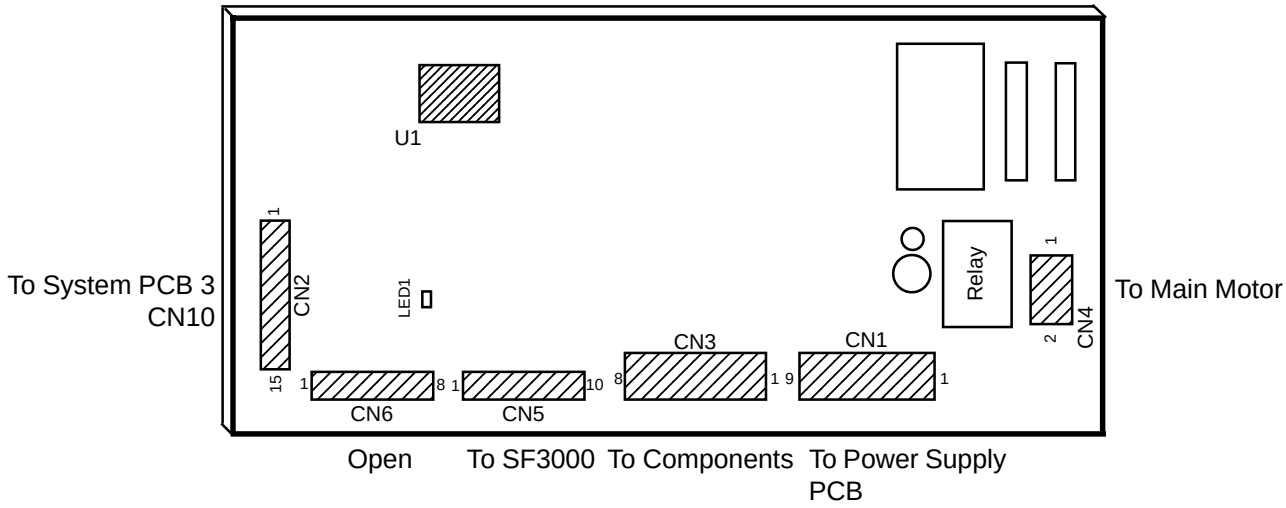


4. IMAGE PROCESSING PCB (CIPDF)(3/3)



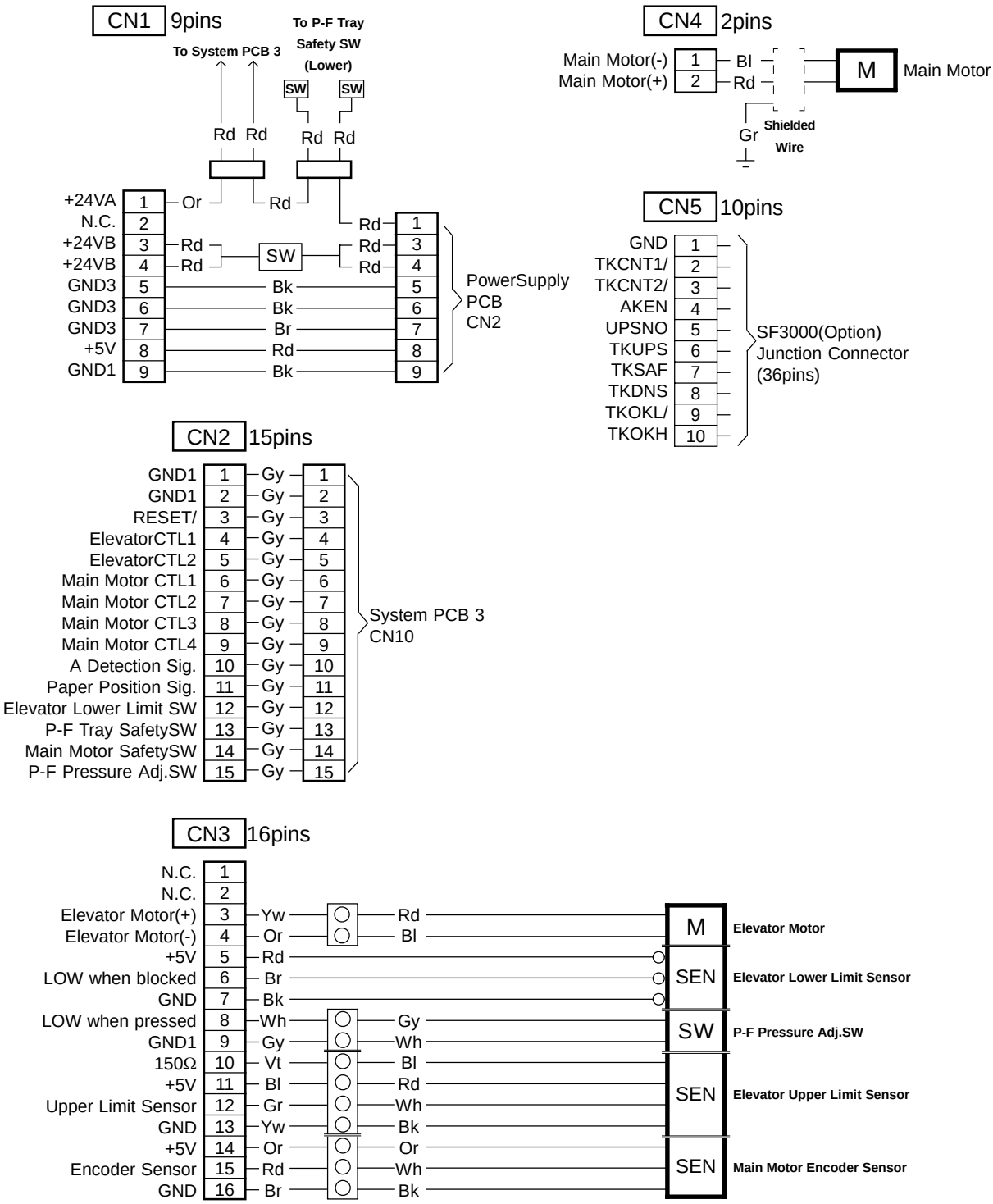
5. MOTOR CONTROL PCB

5-1. Motor Control PCB 2

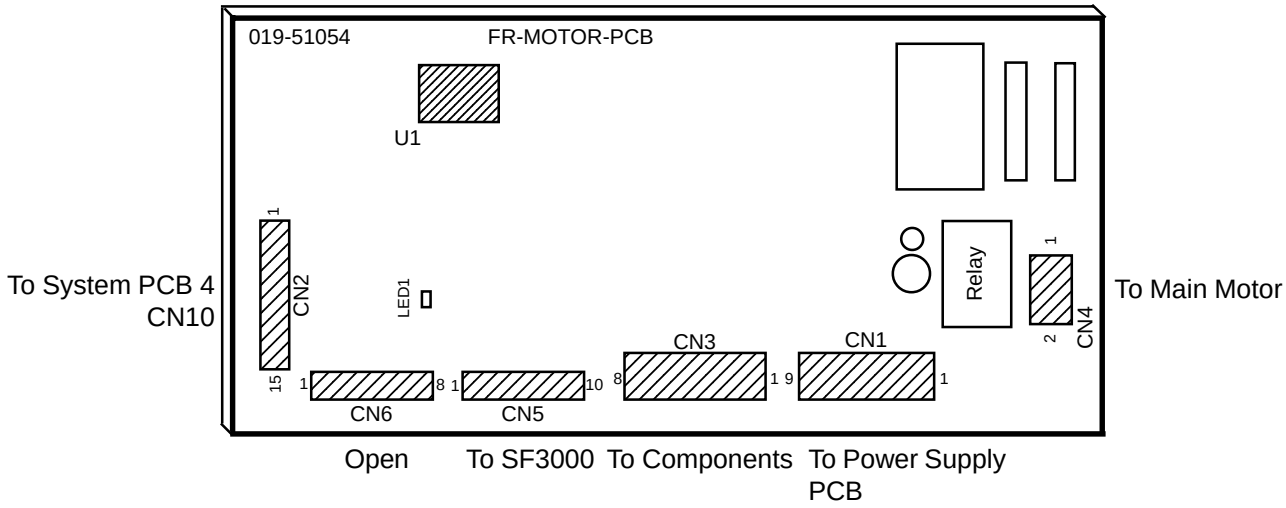


LED **- When LED is ON -**

LED1: The actuator of Elevator upper limit sensor is raised to open the light path.

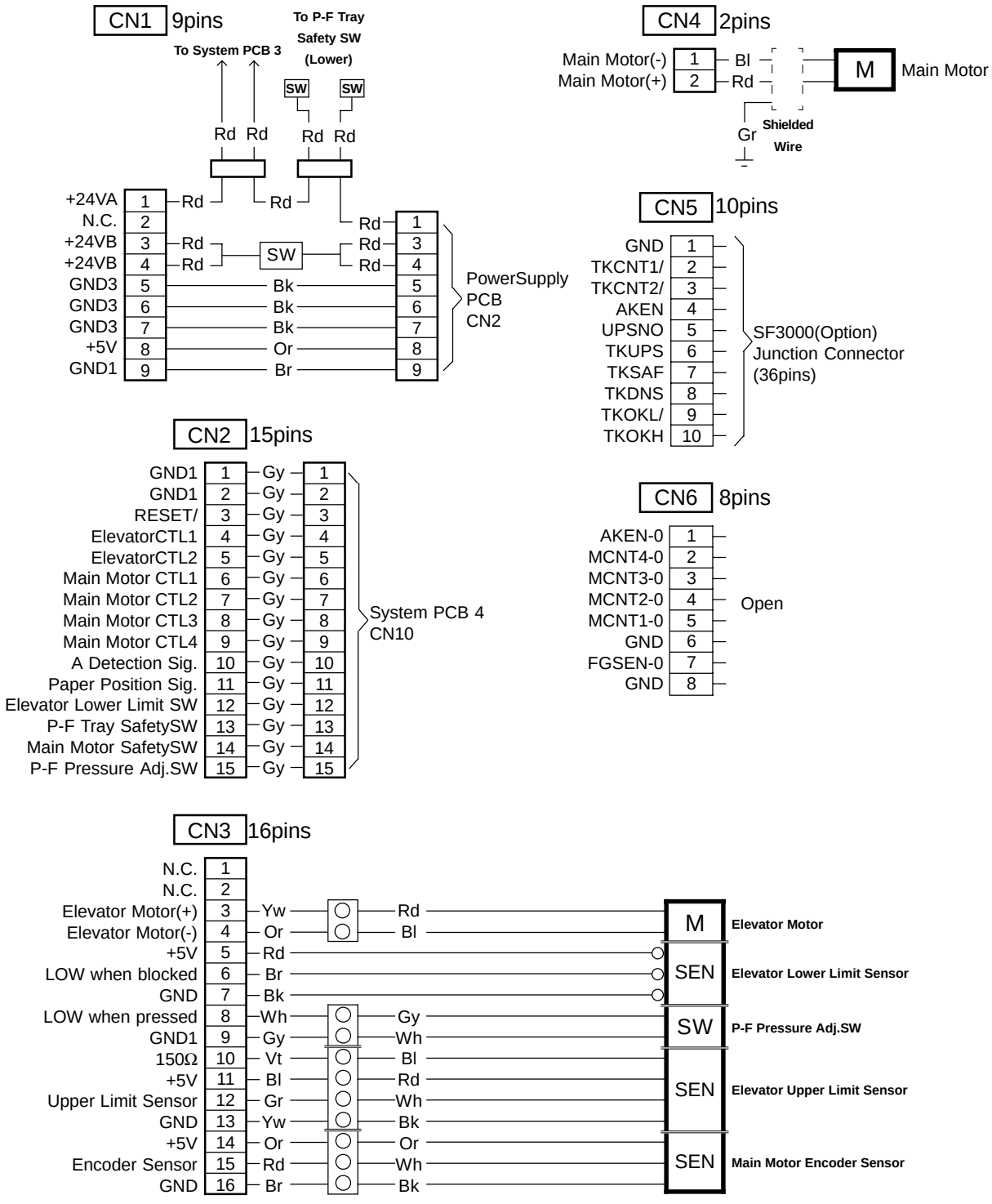

CN1 9pins
To System PCB 3
To P-F Tray Safety SW (Lower)
SW
SW
Rd Rd Rd Rd
+24VA 1 Or
N.C. 2
+24VB 3 Rd
+24VB 4 Rd
GND3 5 Bk
GND3 6 Bk
GND3 7 Br
+5V 8 Rd
GND1 9 Bk
SW
Rd
Rd
Rd
1
3
4
5
6
7
8
9
PowerSupply PCB CN2
CN4 2pins
Main Motor(-) 1 Bl
Main Motor(+) 2 Rd
M
Main Motor
Gr
Shielded Wire
CN5 10pins
GND 1
TKCNT1/ 2
TKCNT2/ 3
AKEN 4
UPSNO 5
TKUPS 6
TKSAF 7
TKDNS 8
TKOKL/ 9
TKOKH 10
SF3000(Option) Junction Connector (36pins)
CN2 15pins
GND1 1 Gy 1
GND1 2 Gy 2
RESET/ 3 Gy 3
ElevatorCTL1 4 Gy 4
ElevatorCTL2 5 Gy 5
Main Motor CTL1 6 Gy 6
Main Motor CTL2 7 Gy 7
Main Motor CTL3 8 Gy 8
Main Motor CTL4 9 Gy 9
A Detection Sig. 10 Gy 10
Paper Position Sig. 11 Gy 11
Elevator Lower Limit SW 12 Gy 12
P-F Tray SafetySW 13 Gy 13
Main Motor SafetySW 14 Gy 14
P-F Pressure Adj.SW 15 Gy 15
System PCB 3 CN10
CN3 16pins
N.C. 1
N.C. 2
Elevator Motor(+) 3 Yw Rd
Elevator Motor(-) 4 Or Bl
+5V 5 Rd
LOW when blocked 6 Br
GND 7 Bk
LOW when pressed 8 Wh Gy
GND1 9 Gy Wh
150Ω 10 Vt Bl
+5V 11 Bl Rd
Upper Limit Sensor 12 Gr Wh
GND 13 Yw Bk
+5V 14 Or Or
Encoder Sensor 15 Rd Wh
GND 16 Br Bk
M
Elevator Motor
SEN
Elevator Lower Limit Sensor
SW
P-F Pressure Adj.SW
SEN
Elevator Upper Limit Sensor
SEN
Main Motor Encoder Sensor

5-2. Motor Control PCB 3



LED **- When LED is ON -**

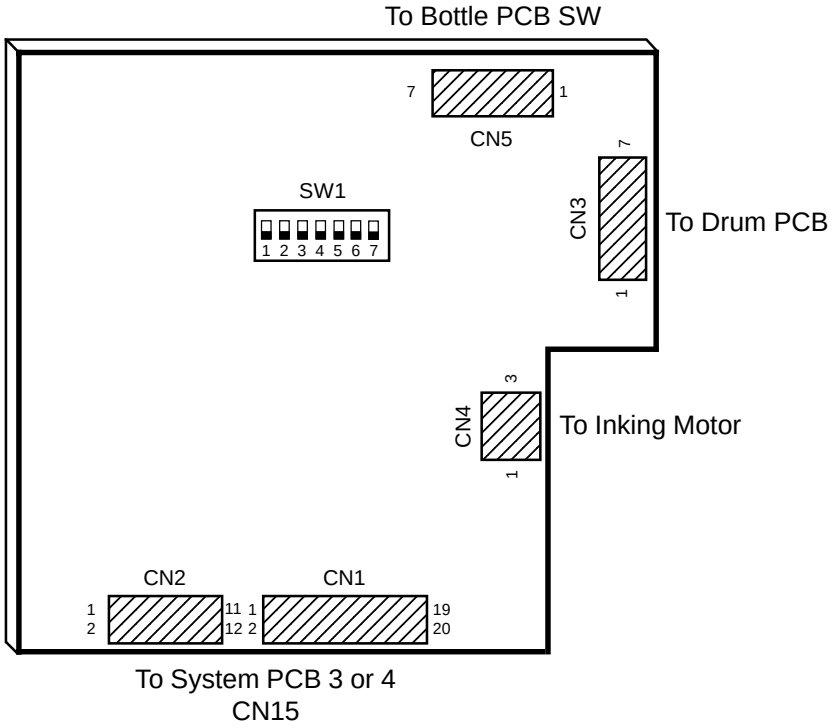
LED1: The actuator of Elevator upper limit sensor is raised to open the light path.


CN1 9pins
To System PCB 3
To P-F Tray Safety SW (Lower)
SW
Rd
+24VA 1
N.C. 2
+24VB 3
+24VB 4
GND3 5
GND3 6
GND3 7
+5V 8
GND1 9
Bk
Or
Br
PowerSupply PCB CN2
CN4 2pins
Main Motor(-) 1
Main Motor(+) 2
Bl
Gr
Shielded Wire
M
Main Motor
CN5 10pins
GND 1
TKCNT1/ 2
TKCNT2/ 3
AKEN 4
UPSNO 5
TKUPS 6
TKSAF 7
TKDNS 8
TKOKL/ 9
TKOKH 10
SF3000(Option) Junction Connector (36pins)
CN2 15pins
GND1 1
GND1 2
RESET/ 3
ElevatorCTL1 4
ElevatorCTL2 5
Main Motor CTL1 6
Main Motor CTL2 7
Main Motor CTL3 8
Main Motor CTL4 9
A Detection Sig. 10
Paper Position Sig. 11
Elevator Lower Limit SW 12
P-F Tray SafetySW 13
Main Motor SafetySW 14
P-F Pressure Adj.SW 15
Gy
System PCB 4 CN10
CN6 8pins
AKEN-0 1
MCNT4-0 2
MCNT3-0 3
MCNT2-0 4
MCNT1-0 5
GND 6
FGSEN-0 7
GND 8
Open
CN3 16pins
N.C. 1
N.C. 2
Elevator Motor(+) 3
Elevator Motor(-) 4
+5V 5
LOW when blocked 6
GND 7
LOW when pressed 8
GND1 9
150Ω 10
+5V 11
Upper Limit Sensor 12
GND 13
+5V 14
Encoder Sensor 15
GND 16
Yw
Or
Rd
Bl
Br
Bk
Wh
Gy
Vt
Gr
M
Elevator Motor
SEN
Elevator Lower Limit Sensor
SW
P-F Pressure Adj.SW
SEN
Elevator Upper Limit Sensor
SEN
Main Motor Encoder Sensor

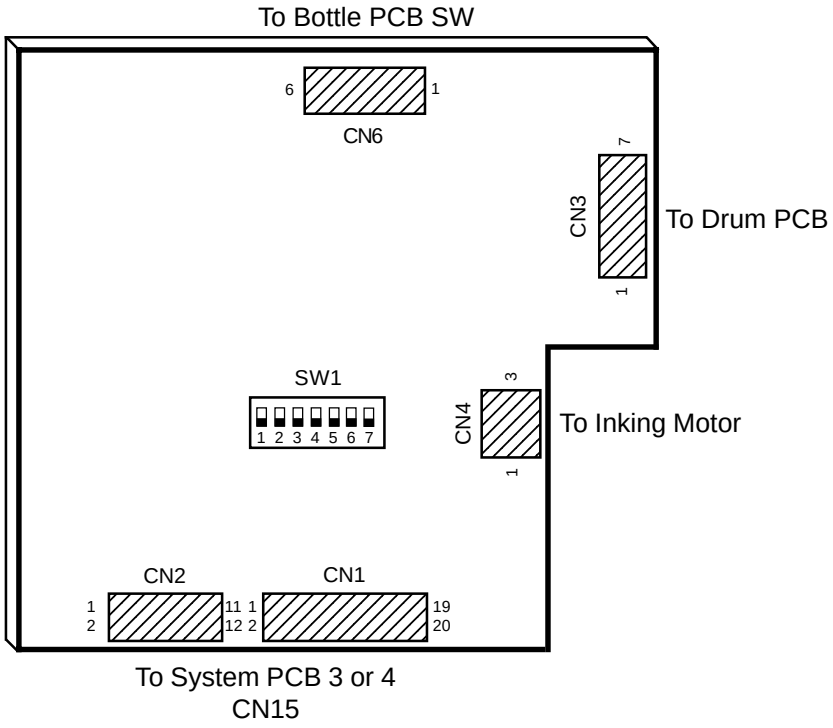
6. DRUM CONTROL PCB (1/2)

6. DRUM CONTROL PCB

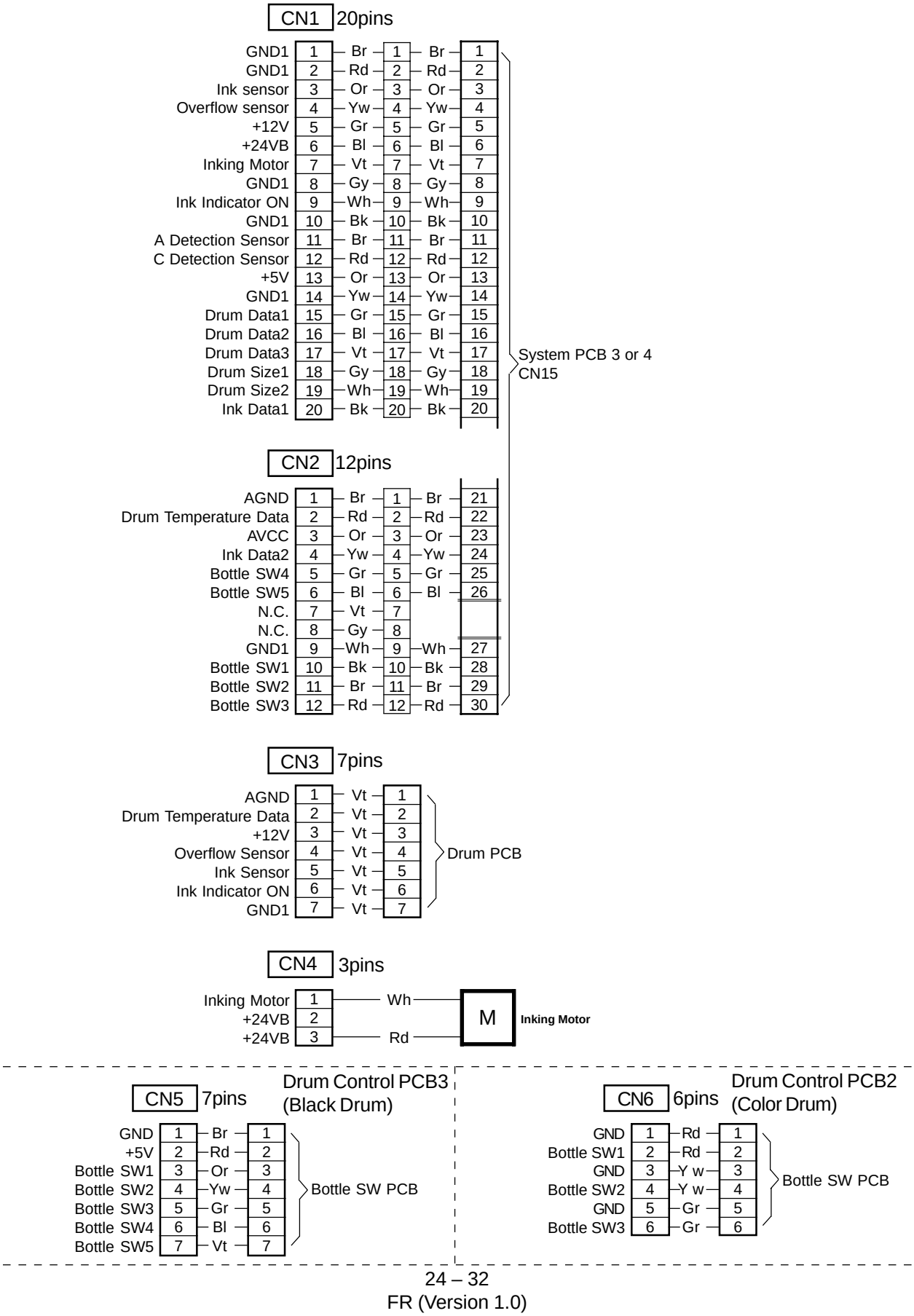
6-1. DRUM CONTROL PCB3 (Black Drum)



6-2. DRUM CONTROL PCB2 (Color Drum)

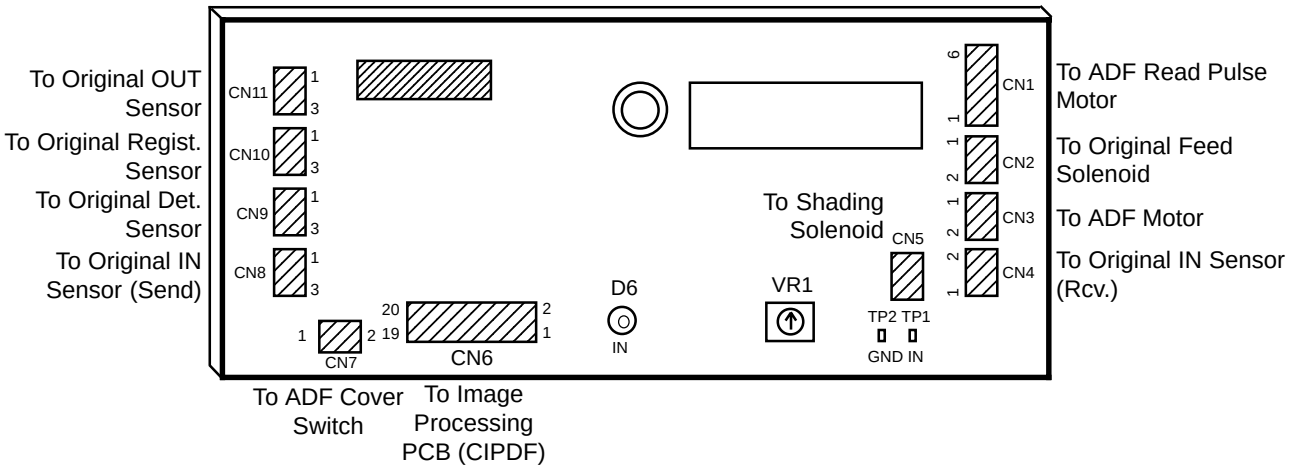


6. DRUM CONTROL PCB 3(2/2)


CN1 20pins
GND1 1 Br 1 Br 1
GND1 2 Rd 2 Rd 2
Ink sensor 3 Or 3 Or 3
Overflow sensor 4 Yw 4 Yw 4
+12V 5 Gr 5 Gr 5
+24VB 6 Bl 6 Bl 6
Inking Motor 7 Vt 7 Vt 7
GND1 8 Gy 8 Gy 8
Ink Indicator ON 9 Wh 9 Wh 9
GND1 10 Bk 10 Bk 10
A Detection Sensor 11 Br 11 Br 11
C Detection Sensor 12 Rd 12 Rd 12
+5V 13 Or 13 Or 13
GND1 14 Yw 14 Yw 14
Drum Data1 15 Gr 15 Gr 15
Drum Data2 16 Bl 16 Bl 16
Drum Data3 17 Vt 17 Vt 17
Drum Size1 18 Gy 18 Gy 18
Drum Size2 19 Wh 19 Wh 19
Ink Data1 20 Bk 20 Bk 20
System PCB 3 or 4
CN15
CN2 12pins
AGND 1 Br 1 Br 21
Drum Temperature Data 2 Rd 2 Rd 22
AVCC 3 Or 3 Or 23
Ink Data2 4 Yw 4 Yw 24
Bottle SW4 5 Gr 5 Gr 25
Bottle SW5 6 Bl 6 Bl 26
N.C. 7 Vt 7
N.C. 8 Gy 8
GND1 9 Wh 9 Wh 27
Bottle SW1 10 Bk 10 Bk 28
Bottle SW2 11 Br 11 Br 29
Bottle SW3 12 Rd 12 Rd 30
CN3 7pins
AGND 1 Vt 1
Drum Temperature Data 2 Vt 2
+12V 3 Vt 3
Overflow Sensor 4 Vt 4
Ink Sensor 5 Vt 5
Ink Indicator ON 6 Vt 6
GND1 7 Vt 7
Drum PCB
CN4 3pins
Inking Motor 1 Wh
+24VB 2
+24VB 3 Rd
M
Inking Motor
CN5 7pins
Drum Control PCB3
(Black Drum)
GND 1 Br 1
+5V 2 Rd 2
Bottle SW1 3 Or 3
Bottle SW2 4 Yw 4
Bottle SW3 5 Gr 5
Bottle SW4 6 Bl 6
Bottle SW5 7 Vt 7
Bottle SW PCB
CN6 6pins
Drum Control PCB2
(Color Drum)
GND 1 Rd 1
Bottle SW1 2 Rd 2
GND 3 Y w 3
Bottle SW2 4 Y w 4
GND 5 Gr 5
Bottle SW3 6 Gr 6
Bottle SW PCB

7. ADF PCB(1/2)

7. ADF PCB



VR

VR1 : For sensitivity adjustment of Original IN Sensor (Rcv.)

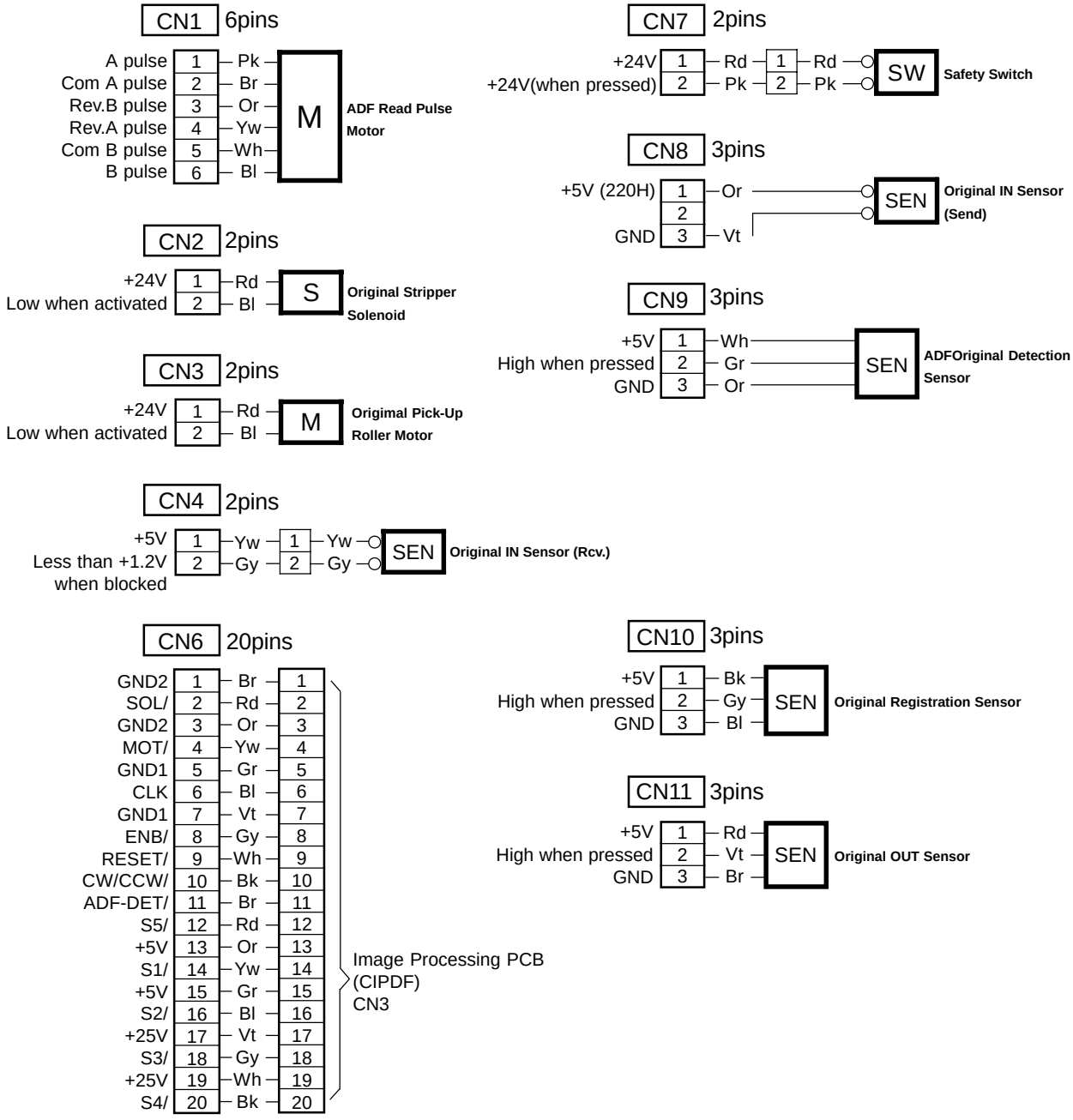
LED **- When LED is ON -**

D6(IN) : The light path of the Original IN Sensor is blocked.

TP

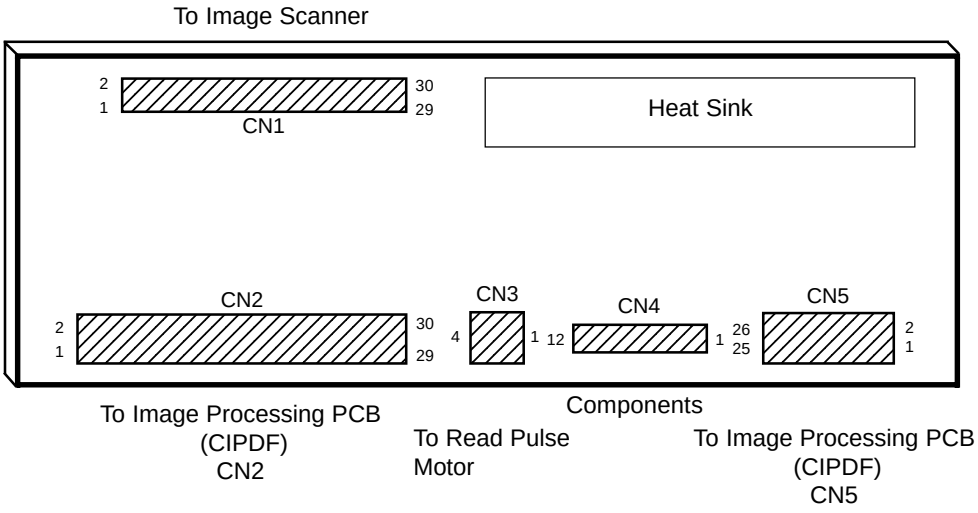
TP1 (IN) : For sensitivity adjustment of Original IN Sensor
TP2 (GND) : For sensitivity adjustment of Original IN Sensor (GND)

7. ADF PCB(2/2)

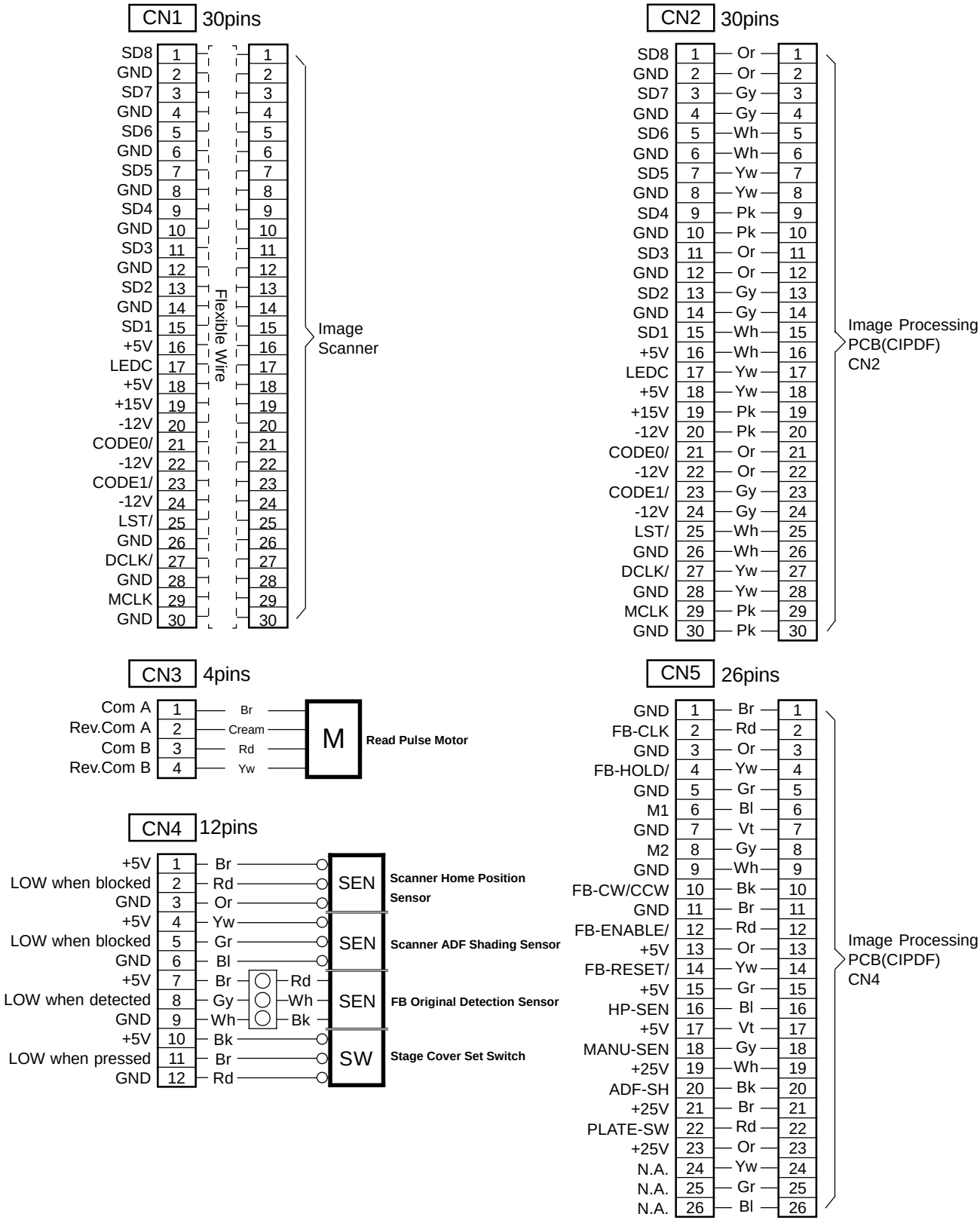

CN1 6pins
A pulse 1 Pk
Com A pulse 2 Br
Rev.B pulse 3 Or
Rev.A pulse 4 Yw
Com B pulse 5 Wh
B pulse 6 Bl
M
ADF Read Pulse Motor
CN2 2pins
+24V 1 Rd
Low when activated 2 Bl
S
Original Stripper Solenoid
CN3 2pins
+24V 1 Rd
Low when activated 2 Bl
M
Origimal Pick-Up Roller Motor
CN4 2pins
+5V 1 Yw
Less than +1.2V when blocked 2 Gy
1 Yw
2 Gy
SEN
Original IN Sensor (Rcv.)
CN6 20pins
GND2 1 Br 1
SOL/ 2 Rd 2
GND2 3 Or 3
MOT/ 4 Yw 4
GND1 5 Gr 5
CLK 6 Bl 6
GND1 7 Vt 7
ENB/ 8 Gy 8
RESET/ 9 Wh 9
CW/CCW/ 10 Bk 10
ADF-DET/ 11 Br 11
S5/ 12 Rd 12
+5V 13 Or 13
S1/ 14 Yw 14
+5V 15 Gr 15
S2/ 16 Bl 16
+25V 17 Vt 17
S3/ 18 Gy 18
+25V 19 Wh 19
S4/ 20 Bk 20
Image Processing PCB (CIPDF) CN3
CN7 2pins
+24V 1 Rd
+24V(when pressed) 2 Pk
1 Rd
2 Pk
SW
Safety Switch
CN8 3pins
+5V (220H) 1 Or
2
GND 3 Vt
SEN
Original IN Sensor (Send)
CN9 3pins
+5V 1 Wh
High when pressed 2 Gr
GND 3 Or
SEN
ADFOriginal Detection Sensor
CN10 3pins
+5V 1 Bk
High when pressed 2 Gy
GND 3 Bl
SEN
Original Registration Sensor
CN11 3pins
+5V 1 Rd
High when pressed 2 Vt
GND 3 Br
SEN
Original OUT Sensor

8. FLAT BED PCB 2(1/2)

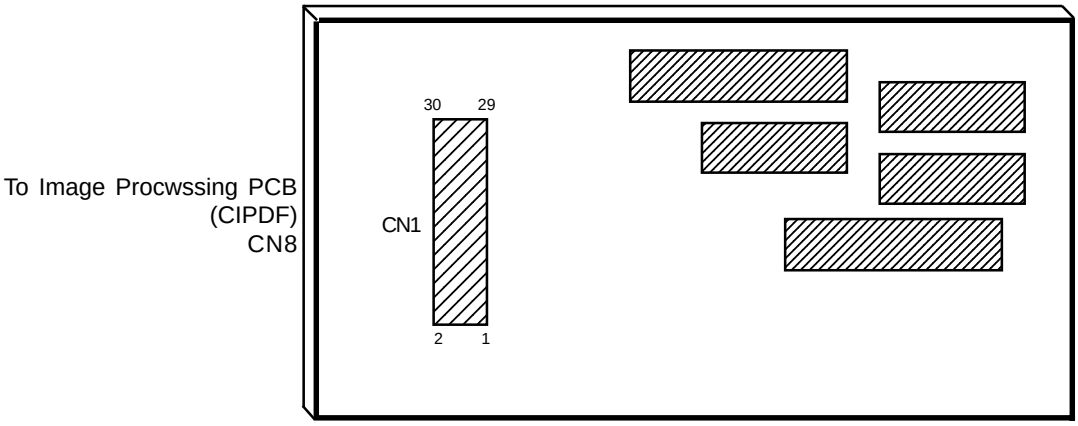
8. FLAT BED PCB 2



8. FLAT BED PCB 2(2/2)



9. TRIMMING PCB 2

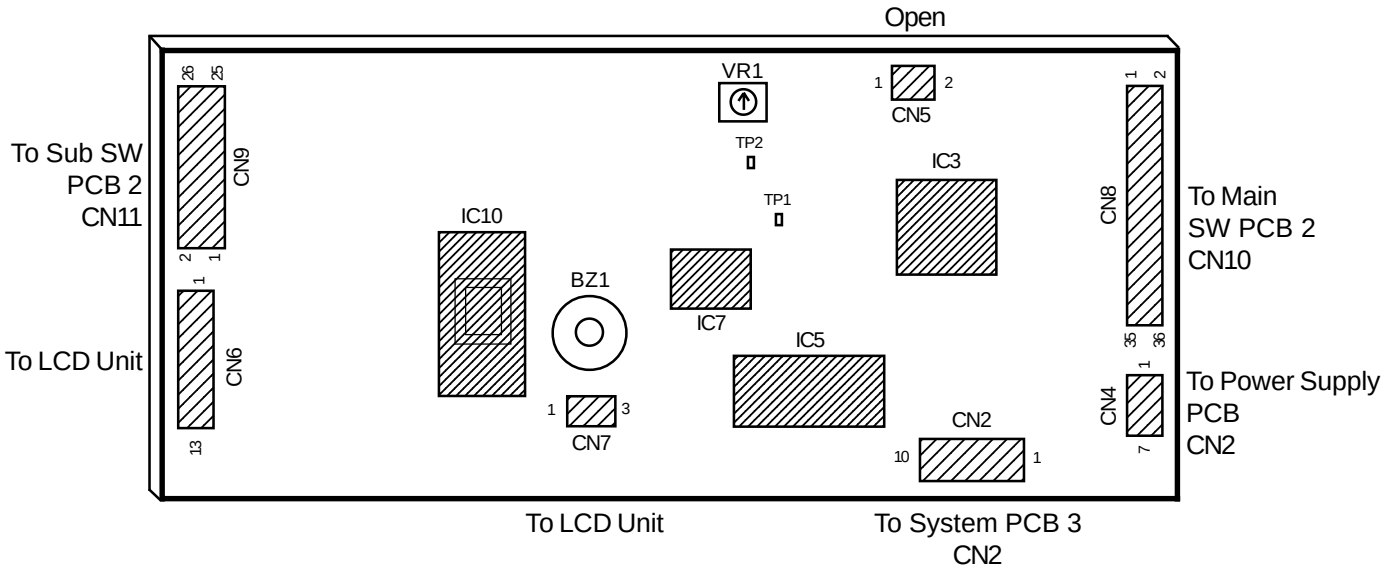


CN1 30pins

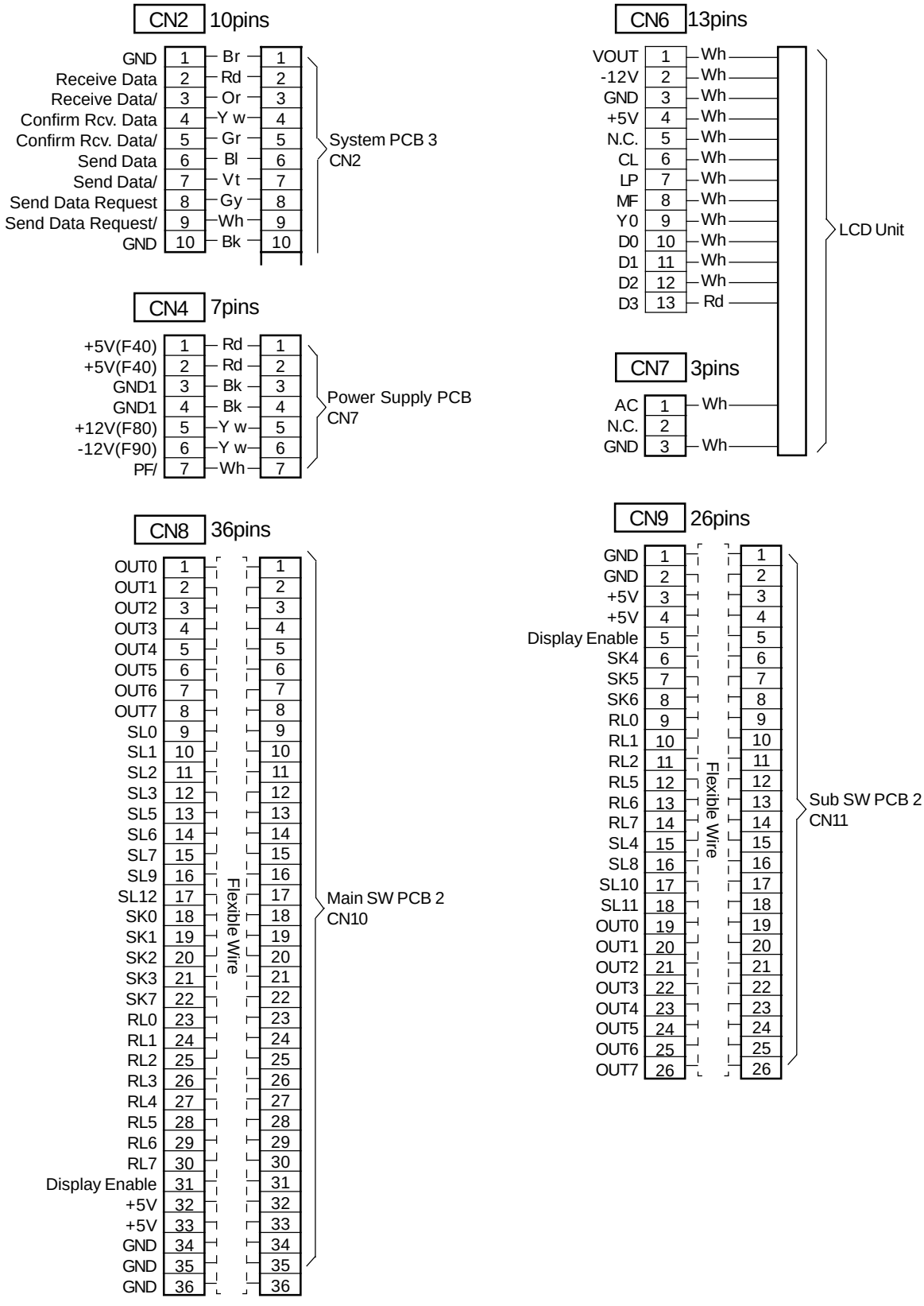
+5V	1	Image Processing PCB (CIPDF) CN8
+5V	2	
LST/	3	
VCK	4	
ENABLE/	5	
SOUT/	6	
WHITE/	7	
PS/	8	
R-W-START/	9	
S-K-SIG/	10	
BUSY-READY/	11	
END/	12	
SIZE1	13	
SIZE2	14	
SIZE3	15	
MS/	16	
CLEAR/	17	
TOP/	18	
N.C.	19	
SM/	20	
PHOTO/	21	
CP/	22	
GND	23	
GND	24	
GND	25	
GND	26	
GND	27	
GND	28	
GND	29	
GND	30	

10. PANEL CONTROL PCB

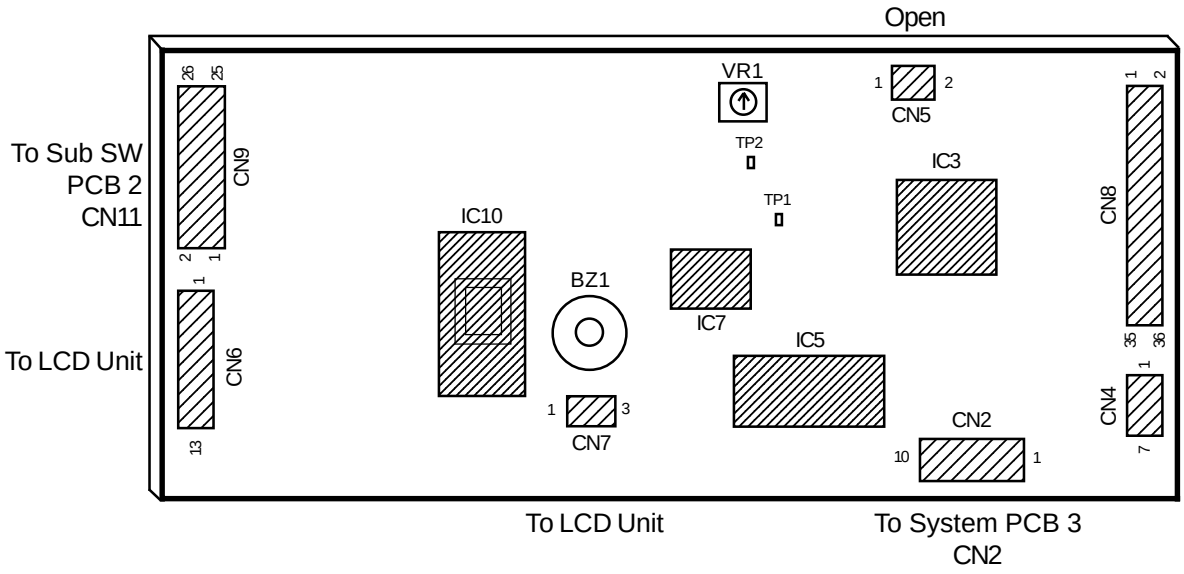
10-1. Panel Control PCB 2



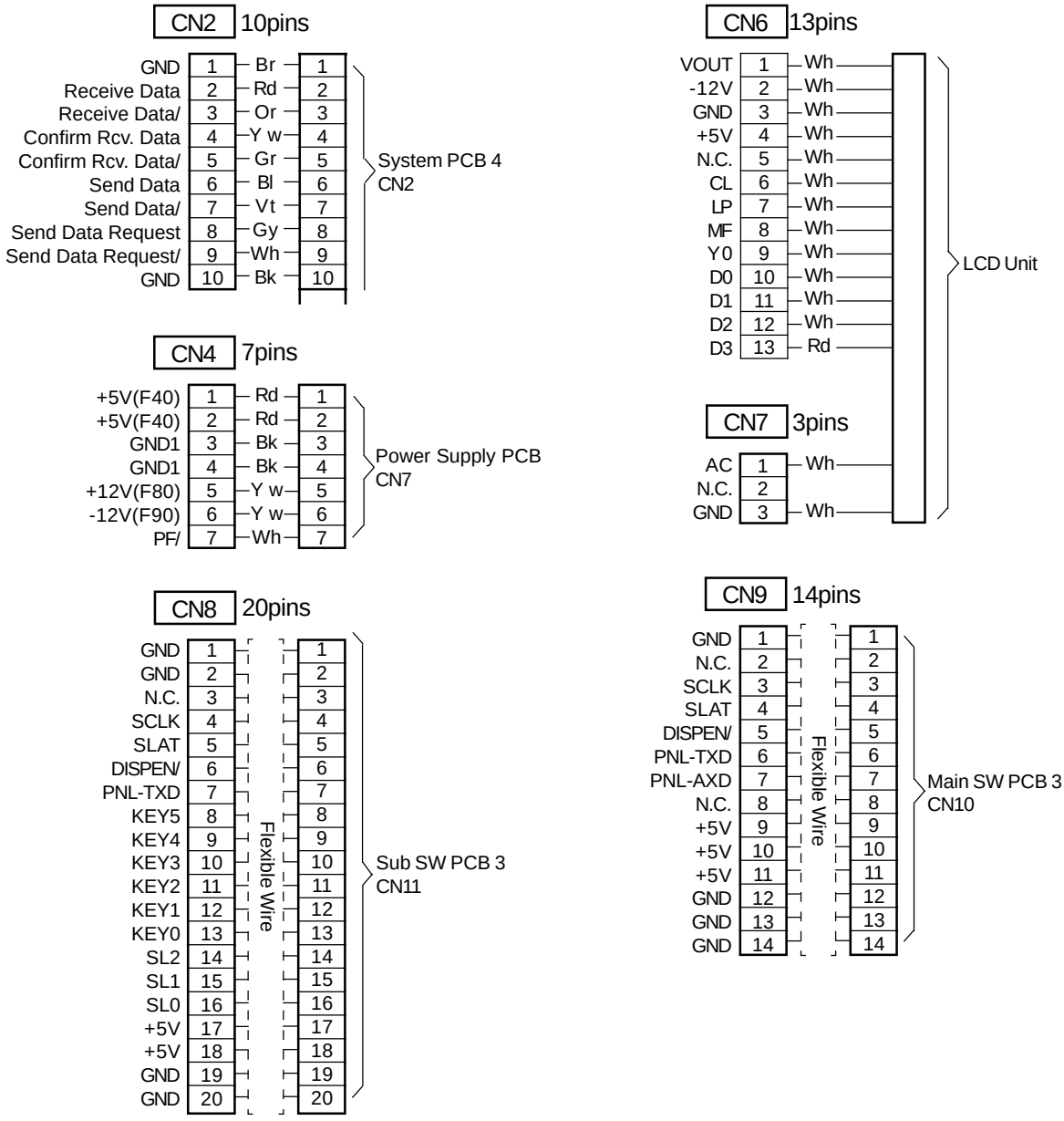
10. PANEL CONTROL PCB(2/4) Panel Control PCB 2



10-2. Panel Control PCB 3

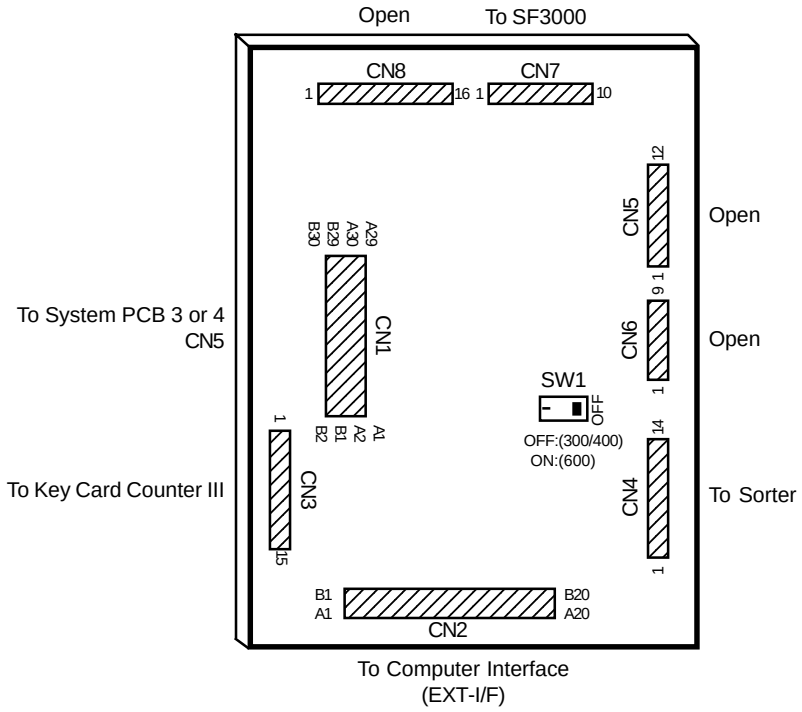


10. PANEL CONTROL PCB(4/4) Panel Control PCB 3



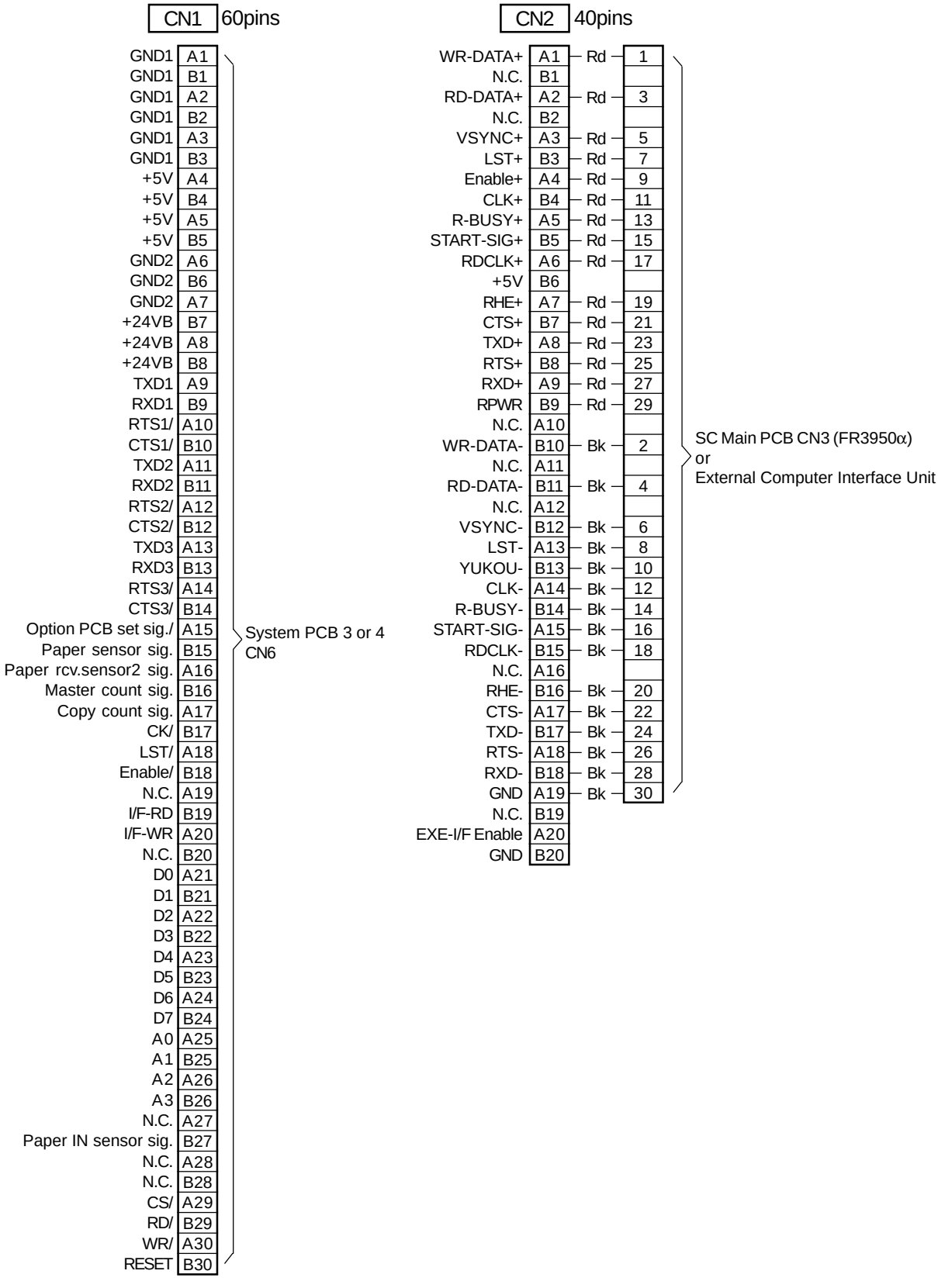
11. OPTION PCB A III(1/3)

11. OPTION PCB A III

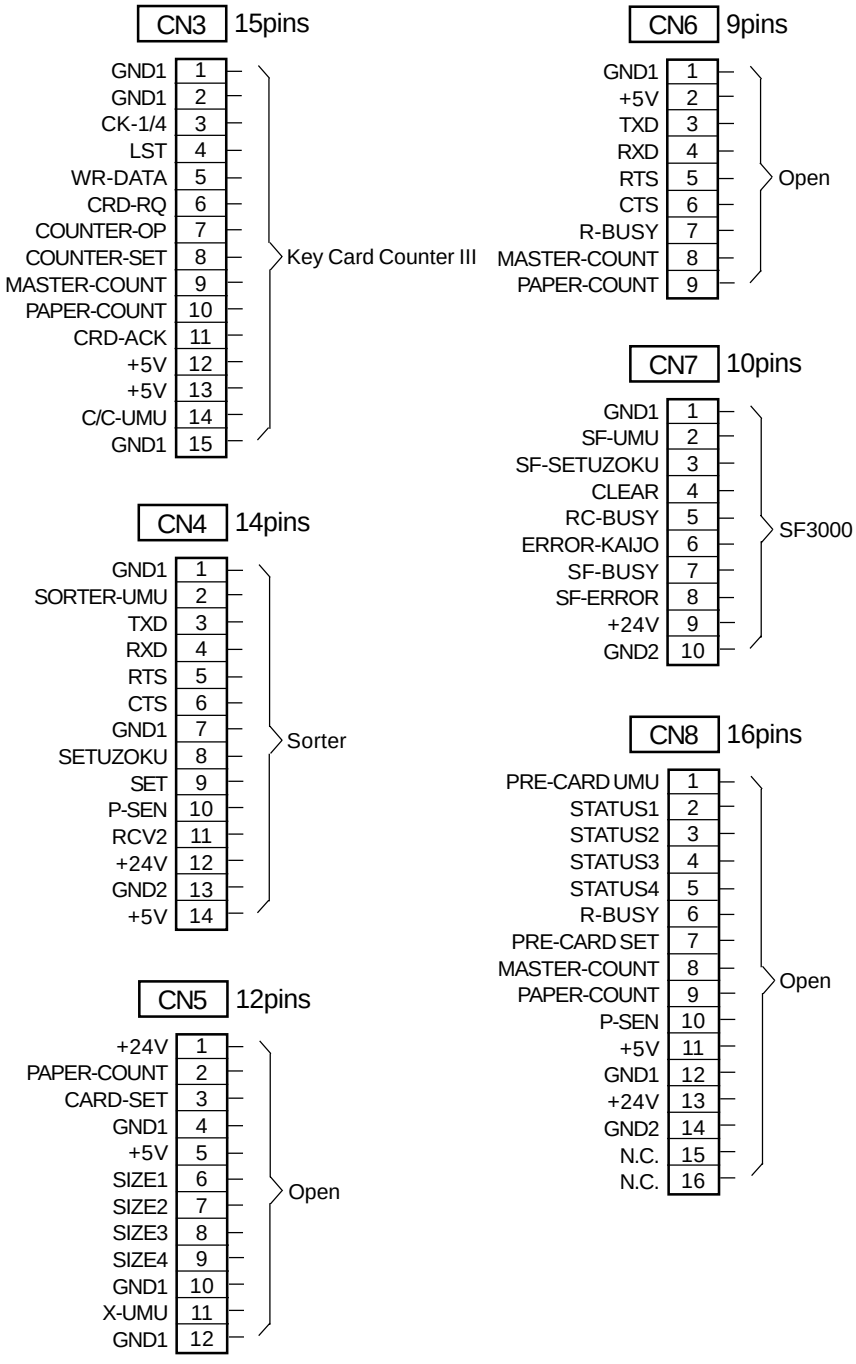


Note: FR3950α - Must set SW1 to OFF (300/400) position

11. OPTION PCB A III(2/3)



11. OPTION PCB A III(3/3)



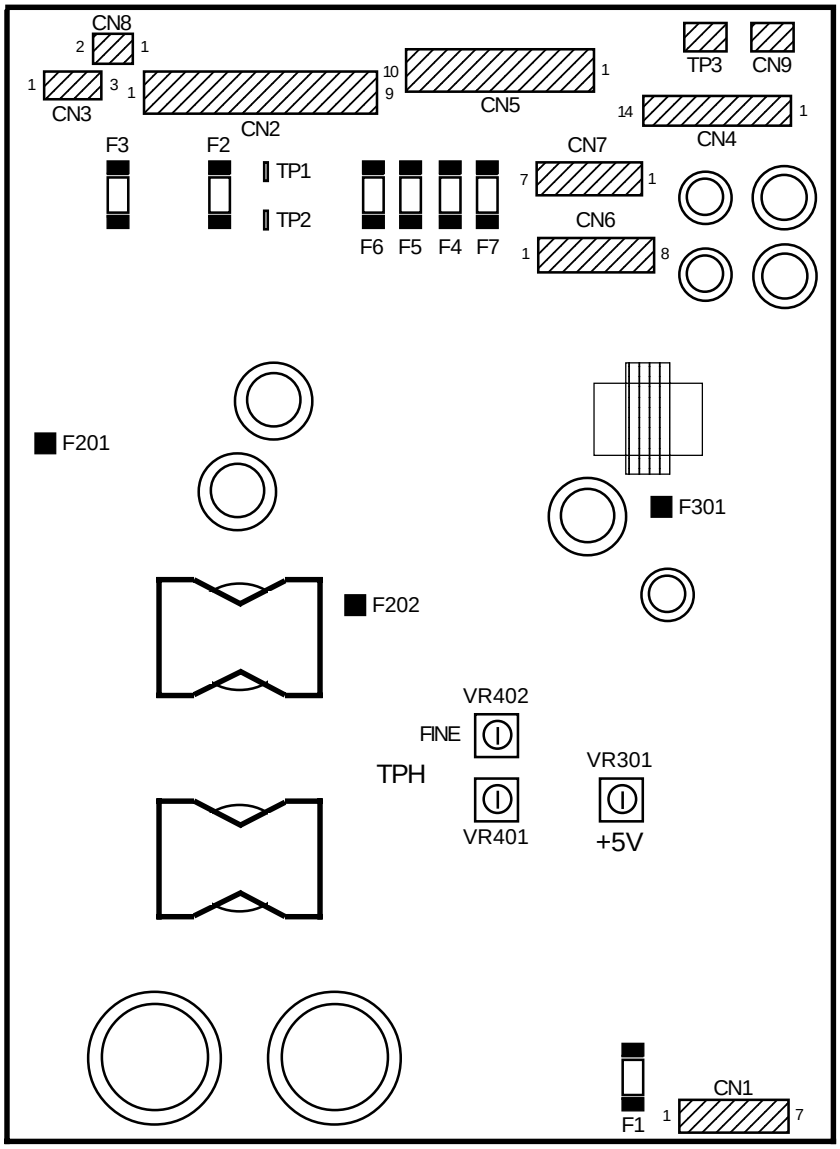
12. POWER SUPPLY PCB

FUSE REPLACEMENT

CAUTION: For continued protection against risk of fire,
replace only with same type and ratings of fuse(s).

Power Supply Model	120V Type		220-240V Type 019-51023-A Nichicon
	Nichicon 019-51038-N	Hitachi 019-51038-H	
F1	10A/AC125V	10A/AC125V	T5A/AC250V
F2	8A/AC125V	8A/AC125V	T6.3A/AC250V
F3	3.15A/AC125V	3.15A/AC125V	T3.15A/AC250V
F4	3.15A/AC125V	3.15A/AC125V	T3.15A/AC250V
F5	3.15A/AC125V	3.15A/AC125V	T3.15A/AC250V
F6	3.15A/AC125V	3.15A/AC125V	T3.15A/AC250V
F7	3.15A/AC125V	3.15A/AC125V	T3.15A/AC250V
F40	N/A	3 or 3.15A/AC125V	N/A
F80	N/A	3 or 3.15A/AC125V	N/A
F90	N/A	3 or 3.15A/AC125V	N/A
F201	3.15A/AC125V	N/A	3.15A/AC125V
F202	3.15A/AC125V	N/A	3.15A/AC125V
F301	3.15A/AC125V	N/A	3.15A/AC125V

12-1. Power Supply PCB VII 100V (Nichicon) 019-51038-A



F1:
10A/AC125V

F2:
8A/AC125V

F3:
3.15A/AC125V

F4:
3.15A/AC125V

F5:
3.15A/AC125V

F6:
3.15A/AC125V

F7:
3.15A/AC125V

F201:
3.15A/AC125V

F202:
3.15A/AC125V

F301:
3.15A/AC125V

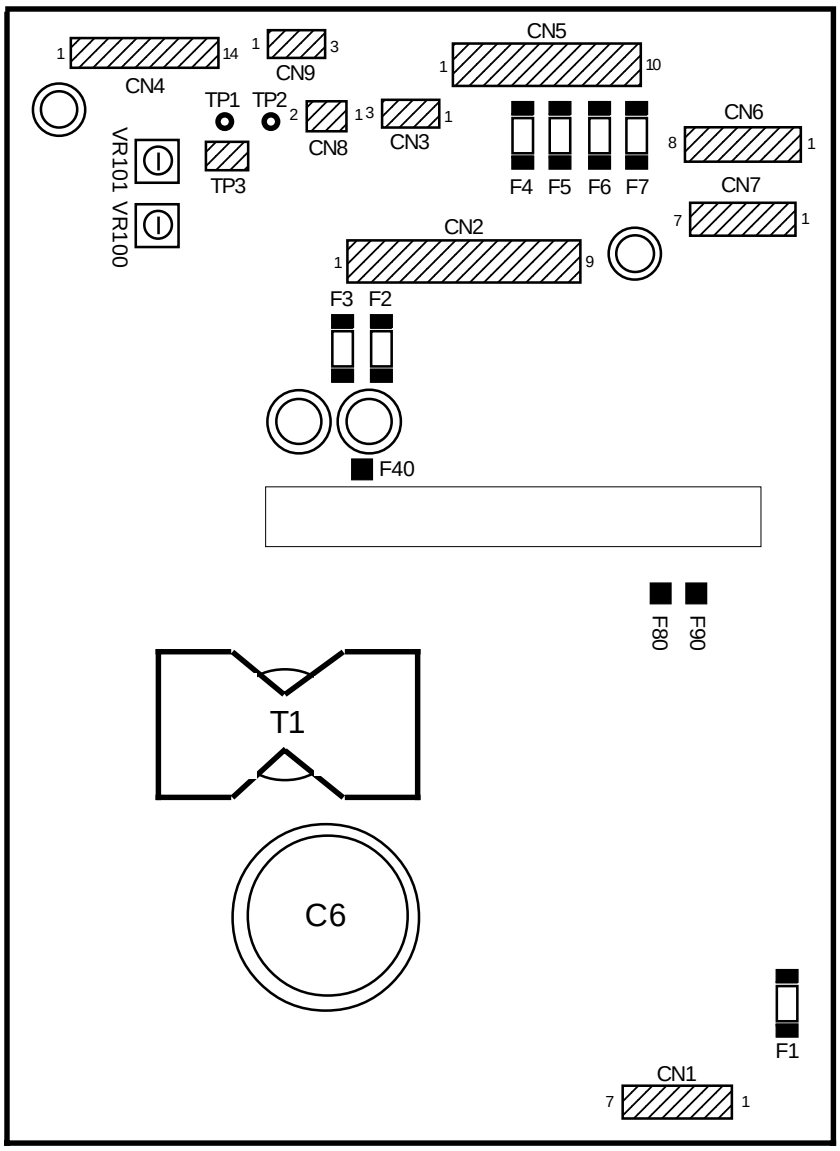
VR

VR301 : For +5V adjustment (Factory adjustment only)
VR401 : For TPH voltage adjustment (Rough)
VR402 : For TPH voltage adjustment (Fine)

Connector

CN1 : AC Input
CN2 : To Motor Control PCB,Safety SW
CN3 : To Suction Fan
CN4 : To TPH
CN5 : To System PCB
CN6 : To Image Processing PCB(CIPDF)
CN7 : To Panel Control PCB
CN8 : To Power Supply Fan
CN9 : N/A

12-2. Power Supply PCB VII 100V (Hitachi) 019-51038-A



F1:
10A/AC125V

F2:
8A/AC125V

F3:
3.15A/AC125V

F4:
3.15A/AC125V

F5:
3.15A/AC125V

F6:
3.15A/AC125V

F7:
3.15A/AC125V

F40:
3A/AC125V

F80:
3A/AC125V

F90:
3A/AC125V

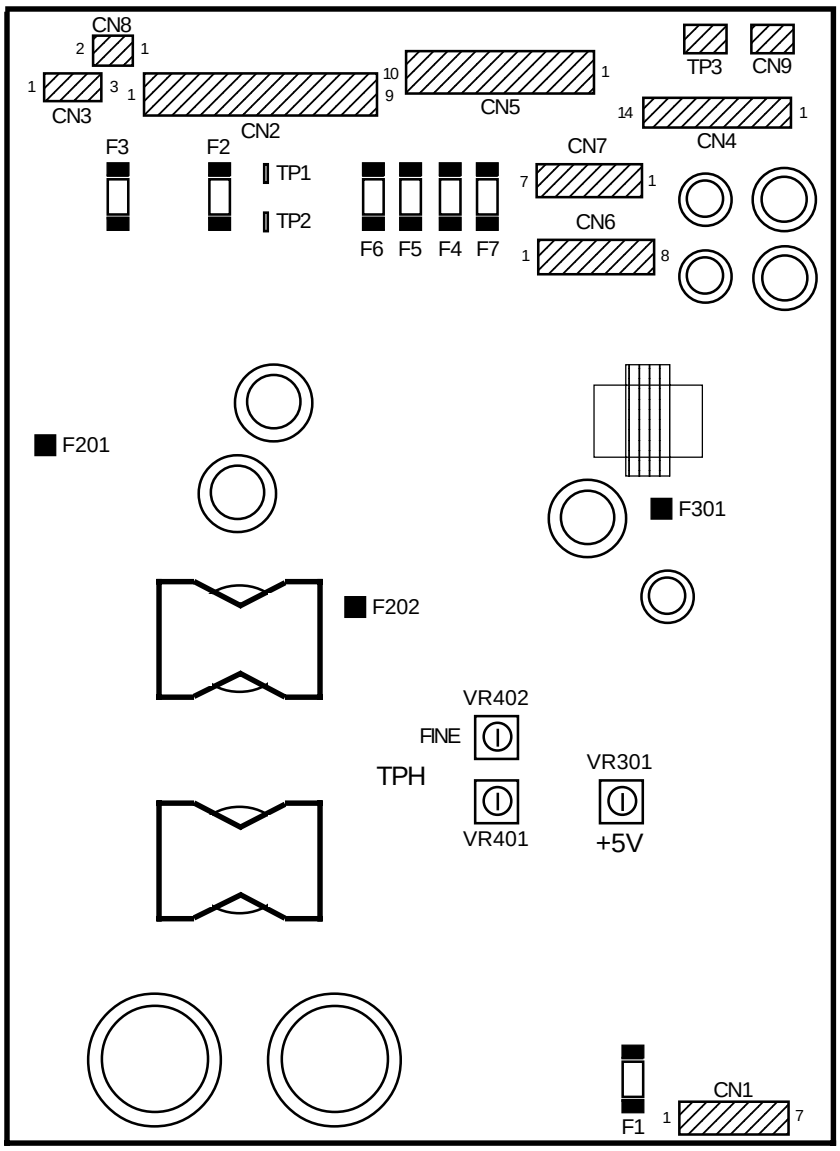
VR

VR100 : For TPH voltage adjustment (Rough)
VR101 : For TPH voltage adjustment (Fine)

Connector

CN1 : AC Input
CN2 : To Motor Control PCB,Safety SW
CN3 : To Suction Fan
CN4 : To TPH
CN5 : To System PCB
CN6 : To Image Processing PCB(CIPDF)
CN7 : To Panel Control PCB
CN8 : To Power Supply Fan

12-3. Power Supply PCB N200V (Nichicon) 019-51023-A



F1:
5A/AC250V

F2:
6.3A/AC250V

F3:
3.15A/AC250V

F4:
3.15A/AC250V

F5:
3.15A/AC250V

F6:
3.15A/AC250V

F7:
3.15A/AC250V

F201:
3.15A/AC125V

F202:
3.15A/AC125V

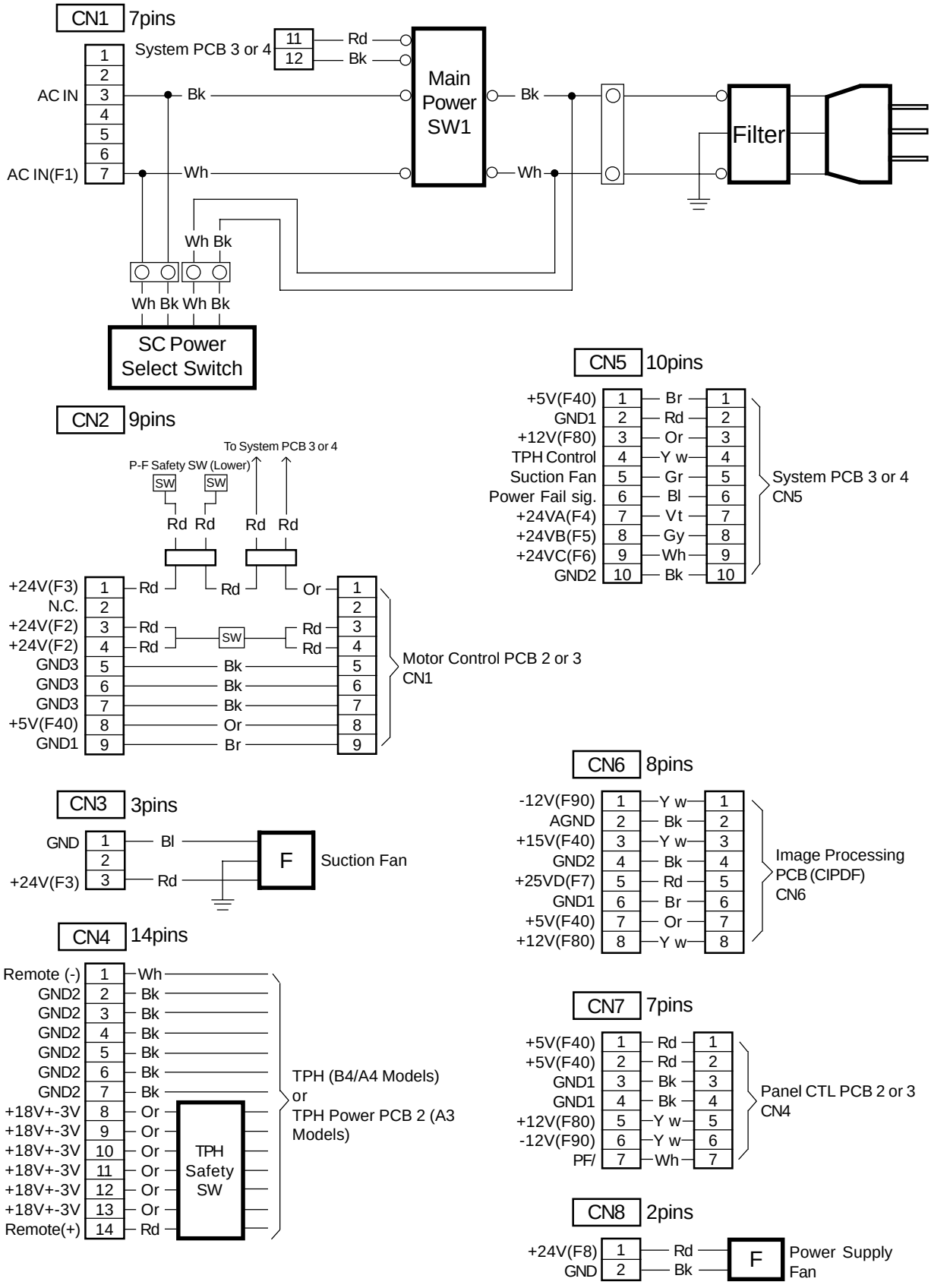
F301:
3.15A/AC125V

VR

VR301 : For +5V adjustment (Factory adjustment only)
VR401 : For TPH voltage adjustment (Rough)
VR402 : For TPH voltage adjustment (Fine)

Connector

CN1 : AC Input
CN2 : To Motor Control PCB,Safety SW
CN3 : To Suction Fan
CN4 : To TPH
CN5 : To System PCB
CN6 : To Image Processing PCB(CIPDF)
CN7 : To Panel Control PCB
CN8 : To Power Supply Fan
CN9 : N/A


CN1 7pins
System PCB 3 or 4
11 Rd
12 Bk
AC IN
AC IN(F1)
Bk
Wh
Main Power SW1
Filter
Wh Bk
Wh Bk Wh Bk
SC Power Select Switch
CN5 10pins
+5V(F40) 1 Br 1
GND1 2 Rd 2
+12V(F80) 3 Or 3
TPH Control 4 Y w 4
Suction Fan 5 Gr 5
Power Fail sig. 6 Bl 6
+24VA(F4) 7 Vt 7
+24VB(F5) 8 Gy 8
+24VC(F6) 9 Wh 9
GND2 10 Bk 10
System PCB 3 or 4 CN5
CN2 9pins
To System PCB 3 or 4
P-F Safety SW (Lower)
SW
Rd Rd Rd Rd
+24V(F3) 1 Rd Rd Or 1
N.C. 2
+24V(F2) 3 Rd Rd 3
+24V(F2) 4 Rd Rd 4
GND3 5 Bk 5
GND3 6 Bk 6
GND3 7 Bk 7
+5V(F40) 8 Or 8
GND1 9 Br 9
Motor Control PCB 2 or 3 CN1
CN6 8pins
-12V(F90) 1 Y w 1
AGND 2 Bk 2
+15V(F40) 3 Y w 3
GND2 4 Bk 4
+25VD(F7) 5 Rd 5
GND1 6 Br 6
+5V(F40) 7 Or 7
+12V(F80) 8 Y w 8
Image Processing PCB (CIPDF) CN6
CN3 3pins
GND 1 Bl
2
+24V(F3) 3 Rd
F
Suction Fan
CN4 14pins
Remote (-) 1 Wh
GND2 2 Bk
GND2 3 Bk
GND2 4 Bk
GND2 5 Bk
GND2 6 Bk
GND2 7 Bk
+18V+-3V 8 Or
+18V+-3V 9 Or
+18V+-3V 10 Or
+18V+-3V 11 Or
+18V+-3V 12 Or
+18V+-3V 13 Or
Remote(+) 14 Rd
TPH Safety SW
TPH (B4/A4 Models) or TPH Power PCB 2 (A3 Models)
CN7 7pins
+5V(F40) 1 Rd 1
+5V(F40) 2 Rd 2
GND1 3 Bk 3
GND1 4 Bk 4
+12V(F80) 5 Y w 5
-12V(F90) 6 Y w 6
PF/ 7 Wh 7
Panel CTL PCB 2 or 3 CN4
CN8 2pins
+24V(F8) 1 Rd
GND 2 Bk
F
Power Supply Fan